**REPORT NUMBER: 208-MGA-2015-001** 

VEHICLE SAFETY COMPLIANCE TESTING
FOR
FMVSS 208, OCCUPANT CRASH PROTECTION
FMVSS 212, WINDSHIELD MOUNTING
FMVSS 219, WINDSHIELD INTRUSION (PARTIAL)
FMVSS 301, FUEL SYSTEM INTEGRITY

MAZDA MOTOR CORPORATION. 2015 MAZDA 3 PASSENGER CAR NHTSA NO.: C20155402

PREPARED BY:
MGA RESEARCH CORPORATION
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BURLINGTON, WI 53105



**TEST DATES: JULY 16, 2015 – AUGUST 31, 2015** 

FINAL REPORT DATE: DECEMBER 3, 2015

#### **FINAL REPORT**

PREPARED FOR:
U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
OFFICE OF ENFORCEMENT
OFFICE OF VEHICLE SAFETY COMPLIANCE
1200 NEW JERSEY AVENUE, S.E., NVS-220
WASHINGTON, D.C. 20590

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	Jeff Lewandowski	, Project Engineer	Date: December 3, 2015
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Accepte	ed By:(	Tajerma St	Valor
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# 15. Supplementary Notes

#### 16. Abstract

Compliance tests were conducted on the subject 2015 Mazda 3 in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP208-14 for the determination of FMVSS 208 compliance. Test failures identified were as follows:

#### **TEST FAILURES:**

None

17. Key Words		18. Distribution S	18. Distribution Statement			
		Copies of this re	Copies of this report are available			
Frontal Impact		from the followin	g:			
40 kmph Vehicle Safety (	Compliance Testing	U.S. Department	of Transportation			
FMVSS 208, "Occupant (	Crash Protection"	National Highway	Traffic Safety			
FMVSS 212, "Windshield	l Mounting"	Administration	-			
FMVSS 219, (partial), "W	/indshield Zone Intrusion"	Technical Information Services (TIS),				
FMVSS 301, "Fuel Syste	m Integrity"	NPO-411				
	<b>G</b> ,	1200 New Jersey	Avenue, S.E.			
		(Room E12-100)	(Room E12-100)			
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# SECTION 1 PURPOSE OF COMPLIANCE TESTS

This Federal Motor Vehicle Safety Standard 208 compliance test is part of a program conducted for the National Highway Traffic Safety Administration (NHTSA) by MGA Research Corporation (MGA) under Contract No.: DTNH22-13-D-00313. The purpose of this test was to determine whether the subject vehicle, a 2015 Mazda 3, NHTSA No.: C20155402, meets certain performance requirements of FMVSS 208, "Occupant Crash Protection"; FMVSS 212, "Windshield Mounting"; FMVSS 219, "Windshield Zone Intrusion"; and FMVSS 301, "Fuel System Integrity". The compliance test was conducted in accordance with OVSC Laboratory Test Procedure No.: TP208-14 dated April 16, 2008.

# **SECTION 2**

#### **TESTS PERFORMED**

Test Vehicle: 2015 Mazda 3 NHTSA No.: C20155402 Test Program: C20155402 Test Dates: C20155402 Test Dates: C20155402 Test Dates: C20155402

The following checked items indicate the tests that were performed:

V	۱ .	
X X X X X X X X X X X X	1.	Rear seating position seat belts
X	2.	Air bag labels (\$4.5.1)
X	3.	Readiness indicator (S4.5.2)
X	4.	Passenger air bag manual cut-off device (S4.5.4)
X	5.	Lap belt lockability (\$7.1.1.5)
X	6.	Seat belt warning system (S7.3)
X	7.	Seat belt contact force (S7.4.3)
X	8.	Seat belt latch plate access (S7.4.4)
X	9.	Seat belt retraction (S7.4.5)
X	10.	Seat belt guides and hardware (S7.4.6)
X	11.	Air bag suppression telltale (S19.2.2)
X	12.	Suppression tests with 12-month-old CRABI dummy (Part 572, Subpart R)
X	13.	Suppression tests with Newborn infant (Part 572, Subpart K)
X	14.	Suppression tests with 3-year-old dummy (Part 572, Subpart P)
X	15.	Suppression tests with 6-year-old dummy (Part 572, Subpart N)
X	16.	Test of Reactivation of the passenger air bag system with an unbelted 5 <sup>th</sup> percentile female
	17	dummy
	17.	Low risk deployment test with 12-month-old dummy (Part 572, Subpart R)
	18.	Low risk deployment test with 3-year-old dummy (Part 572, Subpart P)  Low risk deployment test with 6-year-old dummy (Part 572, Subpart N)
	19. 20.	Low risk deployment test with 6-year-old duffirmy (Part 572, Subpart N)  Low risk deployment test with 5 <sup>th</sup> female dummy (Part 572, Subpart O)
X	21.	Impact Tests
	۷۱.	Frontal Oblique
		Belted 50 <sup>th</sup> male dummy driver and passenger (0 to 48 kmph) (S5.1.1(a))
		Unbelted 50 <sup>th</sup> male dummy driver and passenger (0 to 48 kmph) (S5.1.2(a)(1))
		Unbelted 50 <sup>th</sup> male dummy driver and passenger (32 to 40 kmph) (S5.1.2(a)(1) or
		S5.1.2(b))
		X Frontal 0°
		Belted 50 <sup>th</sup> male dummy driver (0 to 48 kmph) (S5.1.1.(b)(1) or S5.1.1(a))
		Belted 50 <sup>th</sup> male dummy passenger (0 to 48 kmph) (S5.1.1.(b)(1) or S5.1.1(a))
		Belted 5 <sup>th</sup> female dummy driver (0 to 48 kmph) (S16.1(a))
		Belted 5 <sup>th</sup> female dummy passenger (0 to 48 kmph) (S16.1(a))
		Belted 50 <sup>th</sup> male dummy driver and passenger (0 to 56 kmph) (S5.1.1.(b)(2))
		Unbelted 50 <sup>th</sup> male dummy driver and passenger (0 to 48 kmph) (S5.1.2(a) (1))
		Unbelted 50 <sup>th</sup> male dummy driver (32 to 40 kmph) (S5.1.2.(a)(2) or S5.1.2(b))
		Unbelted 50 <sup>th</sup> male dummy passenger (32 to 40 kmph) (S5.1.2.(a)(2) or S5.1.2(b))
		X Unbelted 5 <sup>th</sup> female dummy driver (32 to 40 kmph) (S16.1(b))
		X Unbelted 5 <sup>th</sup> female dummy passenger (32 to 40 kmph) (S16.1(b))
		40% Offset 0° Belted 5 <sup>th</sup> female dummy driver and passenger (0 to 40 kmph) (S18.1)
	22.	FMVSS 204 Indicant Test
X	23.	FMVSS 212 Test
X X X	24.	FMVSS 219 Indicant Test
X	25.	FMVSS 301 Frontal Test
	26.	FMVSS 305 Frontal Indicant Test

For the crash tests, the vehicle was instrumented with 8 accelerometers. The data from the vehicle and dummies were sampled at 10,000 samples per second and processed as specified in SAE J211/1 MAR95 and FMVSS 208, S4.13.

The dynamic tests were recorded using high-speed digital video.

#### **SECTION 3**

#### **INJURY RESULT SUMMARY FOR FMVSS 208 TESTS**

Test Vehicle: 2015 Mazda 3 NHTSA No.: C20155402

Test Program: FMVSS 208 Compliance Test Date: 8/3/15

# 5<sup>th</sup> Percentile Female Low Risk Deployments

5<sup>th</sup> Percentile Female SN 510 Position 1 (Chin On Module) 8/3/15

Injury Criteria	Max. Allowable Injury Assessment Values	Measured Value		
HIC15	700	4		
Peak Nij (Nte)	1.0	0.2		
Time (ms)	NA	112.6		
Peak Nij (Ntf)	1.0	0.2		
Time (ms)	NA	35.5		
Peak Nij (Nce)	1.0	0.1		
Time (ms)	NA	213.9		
Peak Nij (Ncf)	1.0	0.0		
Time (ms)	NA	0.2		
Neck Tension	2070 N	301		
Neck Compression	2520 N	9		
Chest g	60 g	7		
Chest Displacement	52 mm	6		
Left Femur	6805 N	29		
Right Femur	6805 N	35		

Second stage fire time of 100 ms; Injuries calculated on 0 ms to 225 ms.

5<sup>th</sup> Percentile Female SN 510 Position 2 (Chin On Rim) 8/3/15

Injury Criteria	Max. Allowable Injury Assessment Values	Measured Value		
HIC15	700	26		
Peak Nij (Nte)	1.0	0.3		
Time (ms)	NA	15.2		
Peak Nij (Ntf)	1.0	0.2		
Time (ms)	NA	36.5		
Peak Nij (Nce)	1.0	0.1		
Time (ms)	NA	181.6		
Peak Nij (Ncf)	1.0	0.1		
Time (ms)	NA	87.9		
Neck Tension	2070 N	555		
Neck Compression	2520 N	120		
Chest g	60 g	21		
Chest Displacement	52 mm	21		
Left Femur	6805 N	37		
Right Femur	6805 N	41		

Second stage fire time of 100 ms; Injuries calculated on 0 ms to 225 ms.

# SECTION 3 INJURY RESULT SUMMARY FOR FMVSS 208 TESTS

Test Vehicle: 2015 Mazda 3 NHTSA No.: C20155402
Test Program: FMVSS 208 Compliance Test Date: 8/31/15

### 40 kmph Frontal Crash

Impact Angle:	0°			
Belted Dummies:		Yes	X	No
Speed Range:		0 to 40 kmph	X	32 to 40 kmph
Speed Range.		0 to 48 kmph		0 to 56 kmph
				_
Test Speed (kmph):	39.5	Test Weight (kg):	1448.8	
Driver Dummy:	X	5 <sup>th</sup> female		50 <sup>th</sup> male
Passenger Dummy:	X	5 <sup>th</sup> female		50 <sup>th</sup> male

5<sup>th</sup> Percentile Female Frontal Crash Test Vehicles certified to S16.1 (a) (1), S16.1 (a) (2), S16.1 (b), or S18.1

(a) (-); (a) (-); (a) (-); (a)							
Injury Criteria	Max. Allowable Injury Assessment Values	Driver	Passenger				
HIC15	700	55	143				
N <sub>te</sub>	1.0	0.5	0.2				
$N_{tf}$	1.0	0.1	0.1				
$N_{ce}$	1.0	0.0	0.2				
N <sub>cf</sub>	1.0	0.2	0.5				
Neck Tension	2620 N	1111	217				
Neck Compression	2520 N	77	698				
Chest g	60 g	35	39				
Chest Displacement	52 mm	21	6				
Left Femur	6805 N	4054	3531				
Right Femur	6805 N	3053	3045				

# **SECTION 4 DISCUSSION OF TESTS**

NHTSA No.:

2015 Mazda 3 C20155402 Test Vehicle: FMVSS 208 Compliance 7/16/15 - 8/31/15 Test Program: Test Dates:

A blanket and visor were not used in the suppression testing because they did not affect the sensing system used on the vehicle.

There was no valid data after 100 msec on the Instrument Panel (X) accelerometer during the frontal impact crash test.

# **SECTION 5 TEST DATA SHEETS**

Test Vehicle: NHTSA No.: C20155402

2015 Mazda 3 FMVSS 208 Compliance 7/16/15 - 8/31/15 Test Program: Test Dates:

#### **COTR VEHICLE WORK ORDER**

NHTSA No.:

Test Dates:

<u>C20155402</u> 7/16/15 – 8/31/15

2015 Mazda 3 FMVSS 208 Compliance

Test Vehicle:

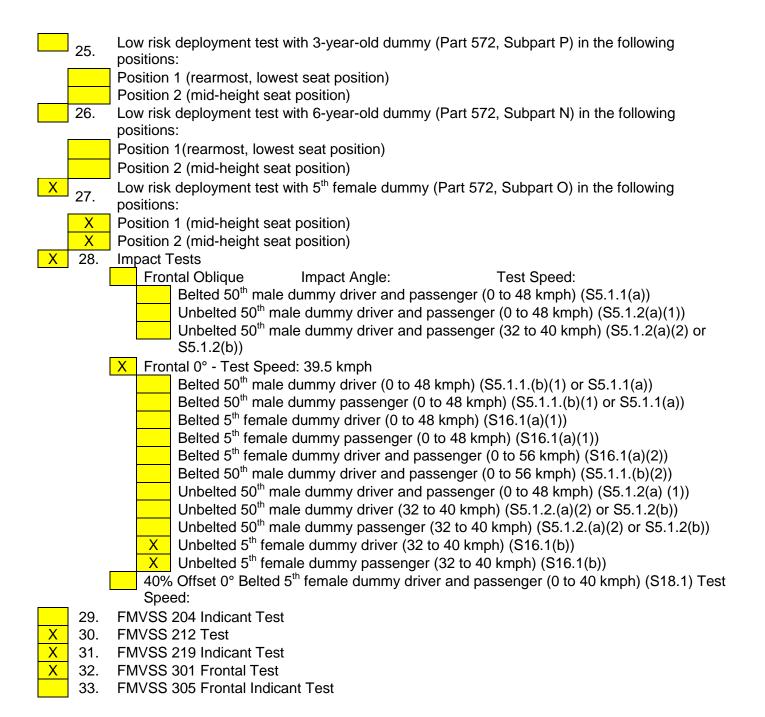
Test Program:

	COT	K Signature.								
	Test	est to be performed for this vehicle are checked below:								
X X	1. 2.	Rear Seating Position Seat B Air Bag Labels (S4.5.1)	elts							
X	3.	Readiness Indicator (S4.5.2)								
X	4.	Passenger Air Bag Manual C	ut-off	Device (S4.5.4)	)					
X	5.	Lap Belt Lockability (S7.1.1.5			•					
X	6.	Seat Belt Warning System (S	•							
X	7.	Seat Belt Contact Force (S7.4	,							
X X X	8.	Seat Belt Latch Plate Access		4.4)						
X	9.	Seat Belt Retraction (S7.4.5)	`	,						
X	10.	Seat Belt Guides and Hardwa	are (S	67.4.6)						
Χ	11.	Air bag suppression telltale (S	319.2	2.2)						
X	12.	Suppression tests with 12-mo	onth-c	old CRABI dumn	ny (Pa	art 572, Subpa	rt R)	using the following		
		indicated child restraints (mid								
		Section B – Rear Facing (unb	elted		facir	_	rward			
		Century Smart Fit 4543		Full Rearward		Mid Position		Full Forward		
	X	Cosco Arriva 22-013	X	Full Rearward	X	Mid Position	X	Full Forward		
		Evenflo Discovery Adjust		Full Rearward		Mid Position		Full Forward		
		Right 212		E !! D		MAN LED 101		le ue		
		Graco Infant 8457		Full Rearward		Mid Position		Full Forward		
	X	Graco Snugride	X	Full Rearward	X	Mid Position	X	Full Forward		
	X	Peg Perego Viaggio	X	Full Rearward	X	Mid Position	X	Full Forward		
	Χ	Section C – Convertible (unbe Britax Roundabout E9L02	X	Full Rearward	X	g, unbelied and Mid Position	X	Full Forward		
	X	Cosco High Back Booster	X	Full Rearward	X	Mid Position	X	Full Forward		
		22-209		i uli ixeai waiu		IVIIG FOSITION	٨	i uli i oiwaiu		
		Cosco Summit Deluxe		Full Rearward		Mid Position		Full Forward		
		22-262						•		
		Cosco Touriva 02519		Full Rearward		Mid Position		Full Forward		
	X	Evenflo Generations 352	X	Full Rearward	X	Mid Position	X	Full Forward		
		Evenflo Medallion 254		Full Rearward		Mid Position		Full Forward		
		Evenflo Tribute V 379		Full Rearward		Mid Position		Full Forward		
	X	Graco ComfortSport	X	Full Rearward	X	Mid Position	X	Full Forward		
		Graco Platinum Cargo		Full Rearward		Mid Position		Full Forward		
		Graco Safeseat Step 2		Full Rearward		Mid Position		Full Forward		
X	13.	Suppression tests with newbo		•	Subpa	art K) using the	follo	wing indicated child		
		restraints (mid-height seat po		1).						
	V	Section A – Car Bed (Belted)		- IID :	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	MILE W	M	le ue		
	X	Angel Guard Angel Ride	X	Full Rearward	X	Mia Position	Χ	Full Forward		

Χ	14.	Suppression tests with 3-year child restraints where a child	restra	aint is required (r				
<u>-</u>		Section C – Convertible (Belt						1
	Χ	Britax Roundabout E9L02	Χ	Full Rearward	X	Mid Position	X	Full Forward
<u></u>	X	Cosco High Back Booster 22-209	X	Full Rearward	X	Mid Position	X	Full Forward
Ī		Cosco Summit Deluxe		Full Rearward		Mid Position		Full Forward
<u>L</u>		22-262		i uli ixeaiwaiu		IVIIG FOSITION		T ull I Olwalu
		Cosco Touriva 02519		Full Rearward		Mid Position		Full Forward
	Х	Evenflo Generations 352	Χ	Full Rearward	X	Mid Position	X	Full Forward
		Evenflo Medallion 254		Full Rearward		Mid Position		Full Forward
		Evenflo Tribute V 379		Full Rearward		Mid Position		Full Forward
-	Χ	Graco ComfortSport	Χ	Full Rearward	X	Mid Position	X	Full Forward
=		Graco Platinum Cargo		Full Rearward		Mid Position		Full Forward
		Graco Safeseat Step 2		Full Rearward		Mid Position		Full Forward
L		Section D – Toddler/Belt Posi	itionir		<del>-</del> d)			1
		Britax Roadster 9004		Full Rearward		Mid Position		Full Forward
-		Cosco High Back Booster		Full Rearward		Mid Position		Full Forward
<u>L</u>		22-209		i dii i todi wara		Wild I Collidii		i am i orwara
	Χ	Cosco Summit Deluxe	Χ	Full Rearward	X	Mid Position	X	Full Forward
_		22-262						•
		Evenflo Generations 352		Full Rearward		Mid Position		Full Forward
		Evenflo Right Fit 245		Full Rearward		Mid Position		Full Forward
	Χ	Graco Platinum Cargo	Χ	Full Rearward	Χ	Mid Position	X	Full Forward
	15.	Suppression tests with repres	enta	tive 3-vear-old cl	hild u	sing the follow	ina ir	dicated child
		restraints where a child restra					3	
		(Appendix H, Data Sheet 19H			Ū	. ,		
		Section C - Convertible (Belte	ed fo	rward-facing)				
		Britax Roundabout E9L02		Full Rearward		Mid Position		Full Forward
		Cosco High Back Booster		Full Rearward		Mid Position		Full Forward
_		22-209						•
		Cosco Summit Deluxe		Full Rearward		Mid Position		Full Forward
_		22-262						
_		Cosco Touriva 02519		Full Rearward		Mid Position		Full Forward
		Evenflo Generations 352		Full Rearward		Mid Position		Full Forward
		Evenflo Medallion 254		Full Rearward		Mid Position		Full Forward
		Evenflo Tribute V 379		Full Rearward		Mid Position		Full Forward
		Graco ComfortSport		Full Rearward		Mid Position		Full Forward
		Graco Platinum Cargo		Full Rearward		Mid Position		Full Forward
<u>_</u>		Graco Safeseat Step 2		Full Rearward		Mid Position		Full Forward
_		Section D – Toddler/Belt Posi	itionir	•	ed)			
		Britax Roadster 9004		Full Rearward		Mid Position		Full Forward
		Cosco High Back Booster		Full Rearward		Mid Position		Full Forward
_		22-209						· ·
		Evenflo Right Fit 245		Full Rearward		Mid Position		Full Forward

X	16.	Suppression tests with 3-year	-old	dummy (Part 57)	2, Su	bpart P) in the	follo	wing positions (mid-	-
		height seat position):							
	X	Sitting on seat with back again	nst s	eat back (S22.2.	2.1)				
•		X Full Rearward X	Mi	d Position X	Full	Forward			
	Х	Sitting on seat with back again	nst re	eclined seat bac	k (S2	2.2.2.2)			
'		X Full Rearward X	Mi	d Position X	Full	Forward			
	Χ	Sitting on seat with back not a	again	st seat back (S2	2.2.2	2.3)			
		X Full Rearward X	Mi	d Position X	Full	Forward			
	Χ	Sitting on seat edge, spine ve	rtica	l, hands by the c	hild's	side (S22.2.2.	4)		
		X Full Rearward X	Mi	d Position X	Full	Forward	•		
	X	Standing on seat, facing forward	ard (	S22.2.2.5)					
		X Full Rearward X	Mi	d Position X	Full	Forward			
	X	Kneeling on seat facing forwa	rd (S	322.2.2.6)					
					Full	Forward			
	X	Kneeling on seat facing rearw							
				` '	Full	Forward			
		Lying on seat (S22.2.2.8)							
!		Full Rearward	Mie	d Position	Full	Forward			
	17.	Suppression tests with repres	_ enta	tive 3-year-old c	hild ir	n the following	posit	ions (mid-height sea	at
	ı	position):		•			•	` 0	
		Sitting on seat with back again	nst s	eat back (S22.2.	2.1)				
		Full Rearward				Forward			
		Sitting on seat with back again	nst re	eclined seat bac	k (S2	2.2.2.2)			
!		Full Rearward		d Position		Forward			
		Sitting on seat with back not a	<u>.</u> again	st seat back (S2	2.2.2	2.3)			
		Full Rearward		d Position		Forward			
		Sitting on seat edge, spine ve	rtica	I, hands by the c	hild's	side (S22.2.2.	4)		
		Full Rearward	Mi	d Position	Full	Forward	•		
		Standing on seat, facing forwa	ard (	S22.2.2.5)					
		Full Rearward		d Position	Full	Forward			
		Kneeling on seat facing forwa	rd (S	S22.2.2.6)					
		Full Rearward	Mie	d Position	Full	Forward			
		Kneeling on seat facing rearw	ard (	(S22.2.2.7)					
'		Full Rearward	Mi	d Position	Full	Forward			
		Lying on seat (S22.2.2.8)							
•		Full Rearward	Mi	d Position	Full	Forward			
Χ	18.	Suppression tests with 6-year	-old	dummy (Part 57	2, Su	bpart N) using	the f	ollowing indicated	
		child restraints where a child i	restra	aint is required (ı	mid-h	eight seat posi	tion):	:	
		Section D							
		Britax Roadster 9004		Full Rearward		Mid Position		Full Forward	
		Cosco High Back Booster		Full Rearward		Mid Position		Full Forward	
		22-209				•		•	
	Χ	Cosco Summit Deluxe	Χ	Full Rearward	X	Mid Position	Χ	Full Forward	
!		22-262		ı		•		•	
		Evenflo Generations 352		Full Rearward		Mid Position		Full Forward	
		Evenflo Right Fit 245		Full Rearward		Mid Position		Full Forward	
	Χ	Graco Platinum Cargo	Χ	Full Rearward	X	Mid Position	Χ	Full Forward	
				-					

	19.	Suppression tests with representative 6-year-old child using the following indicated child restraints where a child restraint is required (mid-height seat position):  Section D
		Britax Roadster 9004 Full Rearward Mid Position Full Forward
		Cosco High Back Booster Full Rearward Mid Position Full Forward
ļ		22-209
		Cosco Summit Deluxe Full Rearward Mid Position Full Forward 22-262
		Evenflo Generations 352 Full Rearward Mid Position Full Forward
		Evenflo Right Fit 245 Full Rearward Mid Position Full Forward
		Graco Platinum Cargo Full Rearward Mid Position Full Forward
Χ	20.	Suppression tests with 6-year-old dummy (Part 572, Subpart N) in the following positions (mid-
/\		height seat position):
	Χ	Sitting on seat with back against seat back (S22.2.2.1)
		X Full Rearward X Mid Position X Full Forward
	X	Sitting on seat with back against reclined seat back (S22.2.2.2)
'		X Full Rearward X Mid Position X Full Forward
	X	Sitting on seat edge, spine vertical, hands by the child's side (S22.2.2.4)
		X Full Rearward X Mid Position X Full Forward
	X	Sitting back in the seat and leaning on the right front passenger door (S24.2.3)
		X Full Rearward X Mid Position X Full Forward
	21.	Suppression tests with representative 6-year-old child in the following positions (mid-height seat
i		position):
		Sitting on seat with back against seat back (S22.2.2.1)
i		Full Rearward Mid Position Full Forward
		Sitting on seat with back against reclined seat back (S22.2.2.2)  Full Rearward  Mid Position  Full Forward
		Sitting on seat edge, spine vertical, hands by the child's side (S22.2.2.4)
ļ		Full Rearward Mid Position Full Forward
		Sitting back in the seat and leaning on the right front passenger door (S24.2.3)
X	22.	Test of Reactivation of the Passenger Air Bag System with an Unbelted 5 <sup>th</sup> percentile female
		dummy (S20.3, 22.3, S24.3) (mid-height seat position). Perform this test after the following
		suppression tests: After each restraint.
	23.	Test of Reactivation of the Passenger Air Bag System with a representative 5 <sup>th</sup> percentile
		female (S20.3, 22.3, S24.3) (mid-height seat position). Perform this test after the following
		suppression tests: After each restraint.
	24.	Low risk deployment test with 12-month-old dummy (Part 572, Subpart R) using the following
		indicated child restraints (full forward, mid-height seat position)(S20.4):  Section B
		Century Smart Fit 4543
		Cosco Arriva 22-013
		Evenflo Discovery Adjust Right 212
		Graco Infant 8457
		Graco Snugride
		Peg Perego Viaggio
I.		Section C
		Britax Roundabout E9L02
		Cosco Touriva 02519
		Evenflo Medallion 254
		Evenflo Tribute V 379
		Graco Comfort Sport



# REPORT OF VEHICLE CONDITION

Test Vehicle: 2015 M Test Program: FMVSS	<u>azda 3</u> 208 Compliance			<u>C20155402</u> 7/16/15 – 8/31/15
CONTRACT NO.: DTN FROM (Lab and rep name TO: NHTSA, OVSC, NVS-	e): MGA Research Co		Date: <u>9/8</u>	<u>/2015</u>
PURPOSE: ( ) Initial Red	ceipt (X) Received vi	a Transfer ()	X) Present	vehicle condition
MODEL YEAR/MAKE/MO MANUFACTURE DATE: NHTSA NO. BODY COLOR: VIN:		2015 Mazda 3 GVWR: GAWR (Fr): GAWR (Rr):	<u>1815 kg</u> 975 kg (	<u>ı (4001 lbs)</u> (2149 lbs) (1870 lbs)
ODOMETER READINGS: PURCHASE PRICE: (\$)	ARRIVAL (miles): COMPLETION (miles 20,315	<u>57</u> ): <u>63</u>	DATE DATE	
DEALER'S NAME:	Muller Honda, 550 Sk	okie Valley Rd,	Highland F	Park, IL 60035
X Yes  B. Tires and wheel rin  C. There are no dents  D. The vehicle has be  X Yes  E. Keyless remote is  F. The glove box contand extra set of ke  G. Proper fuel filler ca  H. Using permanent ron roof line above inside the windshie  X Yes  I. Place vehicle in sto  J. Inspect the vehicle confirm that each is specifications. Any influence the test product the condition to the NH  X Vehicle OK	available and working: tains an owner's manual, verys:	as listed:  or flaws:  is in running col  X Yes  varranty docume  No  ehicle:  n NHTSA number  uses, place a plate and rear side of  s No  luding all window  nctional per the recorded.  If be recorded.  If be recorded.  If be delow in come	X_Yes X_Yes ndition: No ent, consul X_Yes er and FMN acard with if bus:  ws, seats, of manufactur al condition Report any	No mer information, No VSS test type(s) NHTSA number doors, etc. to rer's that could abnormal

# REPORT OF VEHICLE CONDITION AT THE COMPLETION OF TESTING

LIST OF FMVSS TEST VEHICLE: 2015 Mazda REMARKS:	S PERFORMED BY THIS LAB:	FMVSS 208, 212, 21 NHTSA NO.: <u>C2015</u>			
	Equipment that is no longer on the test vehicle as noted on previous page: Right Tail Light, Trunk Lining and Trim, Spare Tire, Jack and Tools, Rear Sill Trim				
Explanation for equipme					
Components removed f	or instrumentation installation and	d to meet target weight.			
Test Vehicle Condition:					
25 mph frontal impact d	amage- front suspension & struct	ure damaged, hood & f	ront quarter		
panels damaged, radiat	or damaged, air bags & pretensio	ners deployed, Stodda	rd in fuel system		
RECORDED BY:	Jeff Lewandowski	DATE:	<u>9/8/2015</u>		
APPROVED BY:	David Winkelbauer	DATE:	<u>9/8/2015</u>		
##########	: # # # # # # # # # # # # # # # # # # #	############	#########		
	RELEASE OF TEST VE	HICLE			
The vehicle described a	bove is released from MGA to be	delivered to:			
Date:	Time:	Odometer:			
Lab Rep's Signature:					
Title:					
Carrier/Customer Rep:					
Date:					

#### **CERTIFICATION LABEL AND TIRE PLACARD INFORMATION**

2015 Mazda 3 FMVSS 208 Compliance Test Vehicle: NHTSA No.: C20155402 Test Program: FMVSS 208
Test Technician: Ben Storey Test Date: 8/31/15

Certification Label (Part 567)		
Manufacturer:	Mazda Motor Corporation	
Date of Manufacture:	01/15	
VIN:	JM1BM1U77F1257430	
Vehicle Certified As (Pass. Car/MPV/Truck/Bus):	Passenger Car	
Front Axle GVWR:	975 kg (2149 lbs)	
Rear Axle GVWR:	848 kg (1870 lbs)	
Total GVWR:	1815 kg (4001 lbs)	

Tire Placard for Motor Vehicles with GVWR of 10,000 lb or Less and Passenger Cars (571.110)		
Vehicle Capacity Weight:	385 kg (850 lbs)	
Designated Seating Capacity Front:	2	
Designated Seating Capacity Rear:	3	
Total Designated Seating Capacity:	5	
Recommended Cold Tire Inflation Pressure Front:	250 kpa (36 psi)	
Recommended Cold Tire Inflation Pressure Rear:	250 kpa (36 psi)	
Recommended Tire Size:	P205/60R16	
Tire Size on Vehicle:	P205/60R16	

	Ben	Blours	
Signature:			Date: 8/31/15

# DATA SHEET 4 REAR SEATING POSITION SEAT BELTS

Test Vehicle: 2015 Mazda 3 NHTSA No.: C20155402 Test Program: Test Date: C20155402 Test Date: NHTSA No.: C20155402 Test Date: C20

Test Technician: Vaclav Grym

	Yes	No
Do all rear seating positions have Type 2 seat belts?	X	

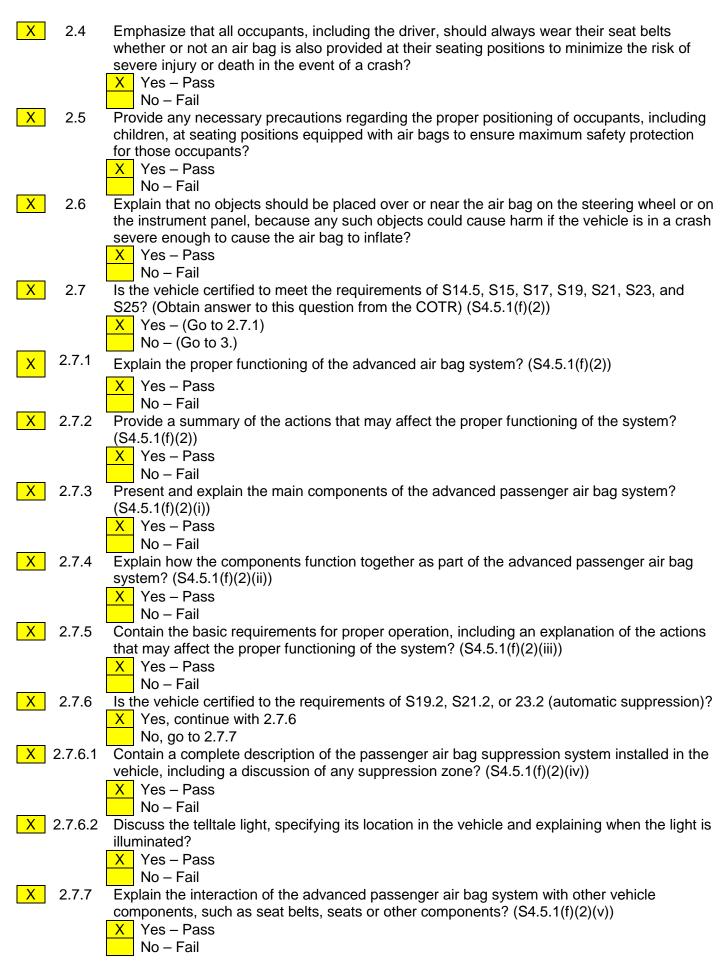
If NO, describe the seat belt installed, the seat location, and any other information about the seat that would explain why a Type 2 seat belt was not installed.

REMARKS:

Voular gryn
Signature: \_\_\_\_\_ Date: 7/16/15

# AIR BAG LABELS (S4.5.1)

	Test Vehicl Test Progra Test Techn	am: FMVSS 208 Compliance	NHTSA No.: Test Date:	C20155402 7/16/15
X		r Bag Maintenance Label and Owner's Man bes the manufacturer recommend periodic r Yes (Go to 1.2)		
	1.2 Do	·	ag maintenance or replac	ement?
	1.3 Do	No – Fail pes the label contain one of the following? Yes – Pass No – Fail		
		neck applicable schedule:  Schedule on label specifies month and yea  Schedule on label specifies vehicle mileag	,	)
		Schedule on label specifies interval measurement (Record interval)	ured from date on certifica	
	be	the label permanently affixed within the past removed without destroying or defacing the erpretation to Todd Mitchell)  Yes – Pass	•	
	1.5 ls	No – Fail the label lettered in English? Yes – Pass No – Fail		
	1.6 Is	the label in block capitals and numerals?  Yes – Pass  No – Fail		
	1.7 Ar	e the letters and numerals at least 3/32 inch Yes – Pass No – Fail	nes high?	
		bes the owner's manual set forth the recomic placement?	mended schedule for mair	ntenance or
X	2.1 Inc	pes the owner's manual: (S4.5.1(f)) clude a description of the vehicle's air bag s Yes – Pass No – Fail	system in an easily unders	tandable format?
Χ		clude a statement that the vehicle is equipper front outboard seating position? Yes – Pass	ed with an air bag and a la	ap/shoulder belt at
X		No – Fail clude a statement that the air bag is a supplisition? Yes – Pass No – Fail	lemental restraint at the fr	ont outboard seating



X 2.7.8 Summarize the expected outcomes when child restraint systems, children and small teenagers or adults are both properly and improperly positioned in the passenger seat, including cautionary advice against improper placement of child restraint systems? (S4.5.1(f)(2)(vi))

X Yes – Pass No – Fail

X 2.7.9 Provide information on how to contact the vehicle manufacturer concerning modifications for persons with disabilities that my affect the advanced air bag system? (S4.5.1(f)(2)(vii))

X Yes – Pass No – Fail

X 3. Sun Visor Air Bag Warning Label (S4.5.1(b)): Vehicles certified to meet the requirements of S19, S21 and S23. (S4.5.1(b)(3))

3.1 Is the label permanently affixed (including permanent marking on the visor material or molding into the visor material) to either side of the sun visor at each front outboard seating position such that it cannot be removed without destroying or defacing the label or the sun visor? (S4.5.1(b)(3)) (3/19/01 legal interpretation to Todd Mitchell)

Driver Side, Yes – Pass Driver Side, No – Fail

X Passenger Side, Yes – Pass

Passenger Side, No – Fail

X 3.2 Does the label conform in content to the label shown in Figure 11 at each front outboard seating position? (S4.5.1(b)(2)) (Vehicles without back seats or the back seat is too small to accommodate a rear-facing child restraint may omit the statement: "Never put a rear-facing child seat in the front." (S4.5.1(b)(3)(v)))



Figure 11. Sun Visor Label Visible when Visor is in Down Position.

Label Outline, Vertical and Horizontal Line Black Bottom Text Black Artwork Black With White Background White Background Top Text and Symbol Circle and Line Red Black With Yellow With White Background Background DEATH or SERIOUS INJURY can occur Children 12 and under can be killed by the air bag The BACK SEAT is the SAFEST place for children NEVER out a rear-facing child seat in the front unless air bag is off Sit as far back as possible from the air ba ALWAYS use SEAT BELTS and CHILD RESTRAINTS

Figure 6b. Sun Visor Label Visible When Visor is in Down Position.

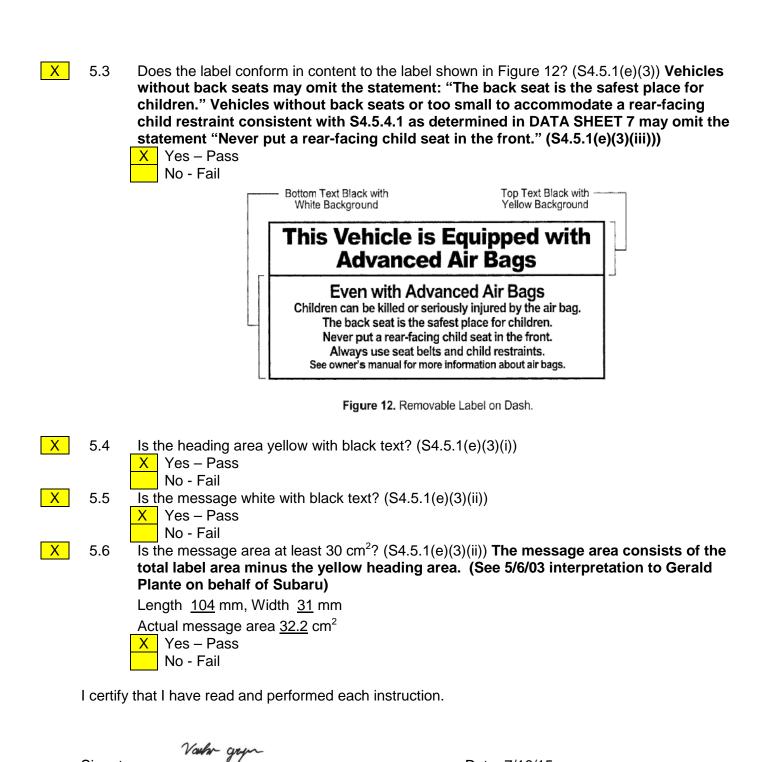
X Driver Side, Yes – Pass Driver Side, No – Fail

X Passenger Side, Yes – Pass Passenger Side, No – Fail

X	3.3	Is the label heading area yellow with the word "WARNING" and the alert symbol in black? (S4.5.1(b)(3)(i))  X Driver Side, Yes – Pass Driver Side, No – Fail  X Passenger Side, Yes – Pass Passenger Side, No – Fail
X	3.4	Is the message area white with black text? (S4.5.1(b)(3)(ii))  X Driver Side, Yes – Pass Driver Side, No – Fail  X Passenger Side, Yes – Pass Passenger Side, No – Fail
X	3.5	Is the message area at least 30 cm <sup>2</sup> ? (S4.5.1(b)(3)(ii))  The message area consists of the total label area minus the yellow heading area and the pictogram. The pictogram is enclosed on the left side and bottom by the edge of the label. The top edge of the pictogram area is defined by a horizontal line midway between the uppermost edge of the pictogram and the lowermost edge of the text. The right side of the pictogram is defined by a vertical line midway between the rightmost edge of the pictogram and the left most edge of the text, including any bullets. (See 5/6/03 interpretation to Gerald Plante on behalf of Subaru)  Driver Side: Length 82 mm, Width 53 mm  Passenger Side: Length 82 mm, Width 53 mm  Driver actual message area 43.5 cm <sup>2</sup>
		Passenger actual message area <u>43.5</u> cm <sup>2</sup> X Driver Side, Yes – Pass Driver Side, No – Fail  X Passenger Side, Yes – Pass Passenger Side, No – Fail
X	3.6	Is the pictogram black on a white background? (S4.5.1(b)(3)(iii))  X Driver Side, Yes – Pass Driver Side, No – Fail  X Passenger Side, Yes – Pass Passenger Side, No – Fail
X	3.7	Is the pictogram at least 30 mm in length? (S4.5.1(b)(3)(iii))  Driver side: Length: 39 mm  Passenger side: Length: 39 mm  X Driver Side, Yes – Pass  Driver Side, No – Fail  X Passenger Side, Yes – Pass  Passenger Side, No – Fail
X	3.8	Is the same side of the sun visor that contains the air bag warning label free of other information with the exception of the air bag maintenance label and/or the rollover-warning label? (S4.5.1(b)(5)(i))  X Driver Side, Yes – Pass Driver Side, No – Fail  X Passenger Side, Yes – Pass Passenger Side, No – Fail
X	3.9	Is the sun visor free of other information about air bags or the need to wear seat belts with the exception of the air bag alert label and/or the rollover-warning label? (S4.5.1(b)(5)(ii))  X Driver Side, Yes – Pass Driver Side, No – Fail  X Passenger Side, Yes – Pass Passenger Side, No – Fail

X	3.10	Does the driver side visor contain a rollover-warning label on the same side of the visor as the air bag warning label?
		Yes (go to 3.10.1)
	3.10.1	X No (go to 4., skipping 3.10.1 through 3.10.3)  Are both the rollover-warning label and the air bag warning label surrounded by a continuous solid-lined border?
		Yes (go to 3.10.2 and skip 3.10.3)
		No (go to 3.10.3 and skip 3.10.2)
	3.10.2	Is the shortest distance from the border of the rollover label to the border of the air bag warning label at least 1 cm? (575.105 (d)(1)(iv)(B))
		actual distance Yes-Pass <b>No-FAIL</b>
	3.10.3	Is the shortest distance from any of the lettering or graphics on the rollover-warning label to any of the lettering or graphics of the air bag warning label at least 3 cm? (575.105 $(d)(1)(iv)(A)$ )
		actual distanceYes-PassNo-FAIL
X	4. 4.1	Air Bag Alert Label (S4.5.1(c) (A "Rollover Warning Label" or "Rollover Alert Label" may be on the same side of the driver's sun visor as the "Air Bag Alert Label." 575.105(d)) Is the Sun Visor Warning Label visible when the sun visor is in the stowed position?
		X If yes for driver and passenger, go to 5. X Driver Side, Yes Driver Side, No X Passenger Side, Yes Passenger Side, No
	4.2	Is the air bag alert label permanently affixed (including permanent marking on the visor material or molding into the visor material) to the sun visor at each front outboard seating position such that it cannot be removed without destroying or defacing the label or the sun visor? (S4.5.1(c)) (3/19/01 legal interpretation to Todd Mitchell)  Driver Side, Yes – Pass
	4.3	Driver Side, No – Fail Passenger Side, Yes – Pass Passenger Side, No – Fail Is the air bag alert label visible when the visor is in the stowed position? (S4.5.1(c)) Driver Side, Yes – Pass Driver Side, No – Fail Passenger Side, Yes – Pass Passenger Side, No – Fail

	4.4	Does the label conform in content to the label shown in Figure 6C? (S4.5.1(c))  Circle and Line Red With White Background  Artwork Black With White Background  ARBAG  WARNING  FLIP VISOR OVER
		Figure 6c. Sun Visor Label Visible When Visor is in Up Position.
		Driver Side, Yes – Pass Driver Side, No – Fail Passenger Side, Yes – Pass Passenger Side, No – Fail
	4.5	Is the message area black with yellow text? (S4.5.1(c)(1))  Driver Side, Yes – Pass  Driver Side, No – Fail  Passenger Side, Yes – Pass  Passenger Side, No – Fail
	4.6	Is the message area at least 20 cm <sup>2</sup> ? (S4.5.1(c)(1)) <b>The message area consists of the black part of the label.</b>
	4.7	Driver Side: Length, Width Passenger Side: Length, Width Actual message area cm²  Driver Side, Yes – Pass Driver Side, No – Fail Passenger Side, Yes – Pass Passenger Side, No – Fail Is the pictogram black with a red circle and slash on a white background? (S4.5.1(c)(2)) Driver Side, Yes – Pass
	4.8	Driver Side, No – Fail Passenger Side, Yes – Pass Passenger Side, No – Fail Is the pictogram at least 20 mm in diameter? (S4.5.1(c)(2))
XXX	5. 5.1	Driver Side: Diametermm  Passenger Side: Diametermm  Driver Side, Yes – Pass  Driver Side, No – Fail  Passenger Side, Yes – Pass  Passenger Side, Yes – Pass  Passenger Side, No – Fail  Label on the Dashboard: Vehicles certified to meet the requirements of S19, S21 and S23?  Does the vehicle have a label on the dash or steering wheel hub? (S4.5.1(e)(3))
		X Yes – Pass
X	5.2	No – Fail Is the label clearly visible from all front seating positions? (S4.5.1(e)(3))  X Yes – Pass No – Fail



Signature:

Date: 7/16/15

# **FMVSS 208 READINESS INDICATOR (S4.5.2)**

	ehicle: rogram: echnician:	2015 Mazda 3 FMVSS 208 Compliand Vaclav Grym	<u>ce</u>	NHTSA No.: Test Date:	C20155402 7/16/15		
system	An occupant restraint system that deploys in the event of a crash shall have a monitoring system with a readiness indicator. A totally mechanical system is exempt from this requirement. (11/8/94 legal interpretation to Lawrence F. Hennegerger on behalf of Breed)						
X 1.	Is the syst Yes X No	em totally mechanical?	(If Yes, this Data She	et is complete	).		
X 2. X 3.				of Instrument C	luster		
X 4.	Is a list of	the elements in the occu provided on a label or in Pass		being monitore	ed by the readiness		
X 5.	Does the v	vehicle have an on-off swar (go to 6) this form is complete)	witch for the passenge	r air bag?			
6.		pag readiness indicator of Pass	off when the passenge	r air bag switch	is in the off		
REMARKS:							
I certify	/ that I have	read and performed ead	ch instruction.				
Signati	√a ure:	who gram	Date: <u>7/16/15</u>				

# PASSENGER AIR BAG MANUAL CUT-OFF DEVICE (\$4.5.4)

NHTSA No.: <u>C20155402</u>

Test Vehicle:

2015 Mazda 3

	Test Pro	gram: <u>F</u>	MVSS 208 Compliance		Test Date:	<u>7/16/15</u>
	Test Tec	hnician: <u>V</u>	aclav Grym			
X	1.		le equipped with an on-o		ivates the air l	pag installed at the
		<u>rig</u> ht front o	utboard seating position	?		
		Yes, go	to 2			
		X No, this	sheet is complete			
	2.	Does the ve	hicle have any forward-	facing rear designate	ted seating po	sitions? (S4.5.4.1(a))
		Yes, go	to 3			
		No, go t	o 4			
	3.	Verification	there is room for a child	restraint in the rear	seat behind t	he <u>driver's seat</u> .
		(S4.5.4.1(b	))			
	3.1	Using all th	e controls that affect the	fore-aft movement	of the seat, m	ove the seat to the
		-	sition. Mark this position			
		N/A - th	e seat does not have for	re-aft adjustment		
	3.2		e controls that affect the	-	of the seat, m	ove the seat to the
			sition. Mark this position			
			e seat does not have fo			
	3.3		eat to the middle of the f	•	ost positions. (	(S8.1.2)
			e seat does not have a		•	,
	3.4		's seat height is adjustat	•	ols that affect	height to put it in the
			tion while maintaining th	-		•
			o seat height adjustmen	-	,	,
	3.5		driver's seat adjustable		that the lumb	ar support is in its
			acted or deflated adjustr			• •
			o lumbar adjustment		•	
	3.6		seat back angle, if adju	stable, is set at the	manufacturer'	s nominal design
			on for a 50th percentile			
		• .	er. (S4.5.4.1(b) and S8.		•	•
			o seat back angle adjus			
			cturer's design driver's s			
			driver's seat back angle	· ·		
	3.7	Is the drive	seat a bucket seat?			
		Yes, go	to 3.7.1 and skip 3.7.2.			
			o 3.7.2 and skip 3.7.1.			
	3.7.1	Bucket sea	is:			
	3.7.1.1	Locate and	mark a vertical Plane B	through the longitud	dinal centerline	e of the driver's seat
		cushion. Th	e longitudinal centerline	of a bucket seat cu	shion is deter	mined at SgRP.
		(S16.3.1.10	) (S4.5.4.1(b)(1))			·
	3.7.1.2	Locate the	ongitudinal horizontal lir	ne in plane B that is	tangent to the	highest point of the
		rear seat cu	ishion behind the driver'	s seat. Measure ald	ong this line fr	om the front of the
		seat back o	f the rear seat to the rea	r of the seat back o	f the driver's s	eat.
			istance			
			nan 720 mm – Pass			
			than 720 mm – <b>FAIL</b>			
-		Go to 4				
	3.7.2		s (including split bench s	· ·		
	3.7.2.1		mark a vertical Plane B		of the steering	wheel parallel to the
		vehicle long	itudinal centerline. (S4.	5.4.1(b)(2))		

3.7.2.2	Locate the longitudinal horizontal line in plane B that is tangent to the highest point of the
	rear seat cushion. Measure along this line from the front of the seat back of the rear seat
	to the rear of the seat back of the front seat.  mm distance
	less than 720 mm – Pass
	more than 720 mm - FAIL
	Go to 4
4.	Does the device turn the air bag on and off using the vehicle's ignition key? (S4.5.4.2)
т.	Yes – Pass
	No – Fail
5.	Is the on-off device separate from the ignition switch? (S4.5.4.2)
0.	Yes – Pass
	No – Fail
6.	Is there a telltale light that comes on when the passenger air bag is turned off? (S4.5.4.2)
-	Yes – Pass
	No – Fail
7.	Telltale light (S4.5.4.3)
7.1	Is the light yellow? (S4.5.4.3(a))
	Yes – Pass
	No – Fail
7.2	Are the words "PASSENGER AIR BAG OFF" or "PASS AIR BAG OFF" (S4.5.4.3(b))
7.2.1	on the telltale?
	Yes – Pass, go to 7.3
	No – go to 7.2.2
7.2.2	within 25 mm of the telltale?
	Measurement from the edge of the telltale light (mm):
	Yes – Pass
7.2	No – Fail  Does the telltele remain illuminated while the air had in turned off? (\$4.5.4.2a))
7.3	Does the telltale remain illuminated while the air bag is turned off? (S4.5.4.3c)) (Leave the air bag off for 5 minutes.)
	Yes – Pass
	No – Fail
7.4	Is the telltale illuminated while the air bag is turned on? (S4.5.4.3(d))
	Yes – Fail
	No – Pass
7.5	Is the telltale combined with the air bag readiness indicator? (S4.5.4.3(e))
	Yes – Fail
	No – Pass
8.	Owner's Manual
8.1	Does the owner's manual contain complete instructions on the operation of the on-off
	switch? (S4.5.4.4(a))
	Yes – Pass
	No – Fail

8.2		ral contain a statement that the on-off switch should only be used of the following risk groups is occupying the right front passenger 4.4(b))
	Infants:	there is no back seat the rear seat is too small to accommodate a child restraint there is a medical condition that must be monitored constantly
	Children aged 1 to 12:	there is a medical condition that must be monitored constantly there is no back seat space is not always available in the rear seat there is a medical condition that must be monitored constantly
	Medical condition:	medical risk causes special risk for passenger greater risk for harm than with the air bag on
	Yes – Pass No – Fail	
8.3	Does the owner's manu on-off switch at other tin Yes – Pass No – Fail	ral contain a warning about the safety consequences of using the mes?
REMAR	S:	
Signature	Voulor gryn	Date: <u>7/16/15</u>

#### LAP BELT LOCKABILITY

Passenger cars, trucks, buses, and multipurpose passenger Vehicles with a GVWR of 10,000 pounds or less. (S7.1.1.5)

Test Vehicle:	<u>2015 Mazda 3</u>	NHTSA No.:	C20155402
Test Program:	FMVSS 208 Compliance	Test Date:	7/16/15

Test Technician: Vaclav Grym

Complete one of these forms for **each** designated seating position that can be adjusted to forward-facing or that is a forward-facing seat, other than the driver's seat (S7.1.1.5(a), <u>and</u> that has seat belt retractors that are not solely automatic locking retractors. (S7.1.1.5(c))

DE	SIGN	ATED SEATING POSITION: Front Passenger
		N/A No retractor is at this position
		N/A – No retractor is at this position N/A – The retractor is an automatic locking retractor ONLY
X	1.	Record test fore-aft seat position: <b>REAR</b>
<b>/</b> \	••	(S7.1.1.5(c)(1)) (Any position is acceptable)
X	2.	Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does <b>NOT</b> have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part of the vehicle. (S7.1.1.5(a))  X Yes – Pass
		No – Fail
X	3.	Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does <b>NOT</b> require inverting, twisting or deforming of the belt webbing. (S7.1.1.5(a))  X Yes – Pass
		No – Fail
X	4.	Place any adjustable seat belt anchorage in the lowest adjustment position.
		N/A The anchorage is not adjustable.
X	5.	Buckle the seat belt. (S7.1.1.5(c)(1))
X	6.	Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))
Χ	7.	Locate a reference point B on the attachment hardware or retractor assembly at the other end of the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))
X	8.	Does the vehicle user need to take some action to activate the locking feature on the la belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing?
		X Yes (go to 8.1)
V	0.4	No (go to 9)
X	8.1	Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b))  X Yes – Pass
		No – Fail
X	9.	Adjust the lap belt or lap belt portion of the seat belt assembly according to any procedures recommended in the vehicle owner's manual to activate any locking feature

belt system. (S7.1.1.5(c)(2) & S7.1.1.5(c)(1))

so that the webbing between points A and B is at the maximum length allowed by the

- X 10. Measure and record the distance between points A and B along the longitudinal centerline of the webbing for the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))
   X Measured distance between A and B (inches): 69 ¼
  - 11. Readjust the belt system so that the webbing between points A and B is at ½ the maximum length of the webbing. (S7.1.1.5(c)(3))
- X 12. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device in Figure 5. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4))

  Measured force application angle: 10° (spec. 5 15 degrees)
- X 13. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4))

  X Measured distance between A and B: 39 ½ inches
  - 14. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))

Record onset rate: <u>15</u> lb/sec (spec. 10 to 50 lb/sec) (S7.1.1.5(c)(5)) Measured distance between A and B: <u>40</u> inches (S7.1.1.5(c)(6))

Let the seat belt webbing retract to its minimum length with the seat belt still buckled.
 To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device in Figure 5. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees

nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4))

Measured force application angle: \_\_10° (spec. 5 - 15 degrees)

X 17. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4))

Measured distance between A and B: 22 ½ inches

X 18. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))

Record onset rate: <u>15</u> lb/sec (spec. 10 to 50 lb/sec) (\$7.1.1.5(c)(5)) Measured distance between A and B: <u>23</u> inches (\$7.1.1.5(c)(6))

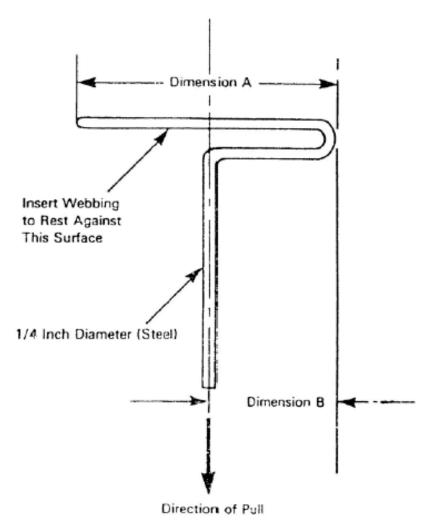
- X 19. Subtract the measurement in 13 from the measurement in 14 and the measurement in 17 from the measurement in 18. Is the difference 2 inches or less for both? (S7.1.1.5(c)(7))
- X
  14 13 =  $\frac{40 39 \frac{1}{2} = \frac{1}{2}}{11 + 12}$  inch;
  18 17 =  $\frac{23 22 \frac{1}{2} = \frac{1}{2}}{11 + 12}$  inch

  X
  Yes Pass
  No Fail

X 20. Subtract the measurement in 14 from the measurement in 10 and the measurement in 18 from the measurement in 10. Is the difference 3 inches or more for both? (S7.1.1.5(c)(8)) $10-14 = 69 \frac{1}{4} - 40 = 29 \frac{1}{4}$  inches;  $10-18 = 69 \frac{1}{4} - 23 = 46 \frac{1}{4}$  inches Yes - Pass No - Fail **REMARKS**:

	Voular gryn	
Signature:		_ Date: <u>7/16/15</u>

I certify that I have read and performed each instruction.



Dimension A - Width of Webbing Plus 1/2 Inch

Dimension B - 1/2 of Dimension A

Figure 5. - Webbing Tension Pull Device

#### LAP BELT LOCKABILITY

Passenger cars, trucks, buses, and multipurpose passenger Vehicles with a GVWR of 10,000 pounds or less. (S7.1.1.5)

Test Vehicle:	<u>2015 Mazda 3</u>	NHTSA No.:	C20155402
Test Program:	FMVSS 208 Compliance	Test Date:	7/16/15

Test Technician: <u>Vaclav Grym</u>

Complete one of these forms for **each** designated seating position that can be adjusted to forward-facing or that is a forward-facing seat, other than the driver's seat (S7.1.1.5(a), <u>and</u> that has seat belt retractors that are not solely automatic locking retractors. (S7.1.1.5(c))

nas	seai	beit retractors that are not solely automatic locking retractors. (57.1.1.5(c))
DE	SIGN	ATED SEATING POSITION: Left Rear Passenger
		N/A – No retractor is at this position N/A – The retractor is an automatic locking retractor ONLY
X	1.	Record test fore-aft seat position: <b>FIXED</b> (S7.1.1.5(c)(1)) (Any position is acceptable)
X	2.	Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does <b>NOT</b> have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part of the vehicle.  (S7.1.1.5(a))  X Yes – Pass No – Fail
X	3.	Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does <b>NOT</b> require inverting, twisting or deforming of the belt webbing. (S7.1.1.5(a))  X Yes – Pass No – Fail
X	4.	Place any adjustable seat belt anchorage in the lowest adjustment position.  X N/A The anchorage is not adjustable.
X	5.	Buckle the seat belt. (S7.1.1.5(c)(1))
X	6.	Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))
X	7.	Locate a reference point B on the attachment hardware or retractor assembly at the other end of the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))
X	8.	Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing?  X Yes (go to 8.1) No (go to 9)
X	8.1	Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b))  X Yes – Pass No – Fail
X	9.	Adjust the lap belt or lap belt portion of the seat belt assembly according to any

belt system. (S7.1.1.5(c)(2) & S7.1.1.5(c)(1))

procedures recommended in the vehicle owner's manual to activate any locking feature so that the webbing between points A and B is at the maximum length allowed by the

- X 10. Measure and record the distance between points A and B along the longitudinal centerline of the webbing for the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))
   X Measured distance between A and B (inches): 68 ½
  - 11. Readjust the belt system so that the webbing between points A and B is at ½ the maximum length of the webbing. (S7.1.1.5(c)(3))
    12. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds
  - 12. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device in Figure 5. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4))

    Measured force application angle: 10° (spec. 5 15 degrees)
- X
   X
   X
   X
   Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4))
   X
   X
   Measured distance between A and B: 42 ¾ inches
- 14. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))

Record onset rate: 15 lb/sec (spec. 10 to 50 lb/sec) (\$7.1.1.5(c)(5)) Measured distance between A and B: 43 inches (\$7.1.1.5(c)(6))

X
 X
 15. Let the seat belt webbing retract to its minimum length with the seat belt still buckled.
 16. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device in Figure 5. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4))

Measured force application angle: 10° (spec. 5 - 15 degrees)

X 17. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4))

Measured distance between A and B: 23 ½ inches

X 18. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))

Record onset rate: <u>15</u> lb/sec (spec. 10 to 50 lb/sec) (S7.1.1.5(c)(5)) Measured distance between A and B: <u>23 7/8</u> inches (S7.1.1.5(c)(6))

- X 19. Subtract the measurement in 13 from the measurement in 14 and the measurement in 17 from the measurement in 18. Is the difference 2 inches or less for both?

  (\$7.1.1.5(c)(7))
- (S7.1.1.5(c)(7))  $\begin{array}{c}
  X \\
  X
  \end{array}$   $\begin{array}{c}
  14 13 = 43 42 \frac{3}{4} = \frac{14}{2} \text{ inch;} \\
  18 17 = 23 \frac{7/8 23 \frac{1}{2}}{23 \frac{1}{2}} = \frac{3/8}{23 \frac{1}{2}} \text{ inch}
  \end{array}$ 
  - X Yes Pass No – Fail

X 20.		·
REMARK	S:	
Signature	Varker gegn	Date: <u>7/16/15</u>

### LAP BELT LOCKABILITY

Passenger cars, trucks, buses, and multipurpose passenger Vehicles with a GVWR of 10,000 pounds or less. (S7.1.1.5)

Test Vehicle:	<u>2015 Mazda 3</u>	NHTSA No.:	C20155402
Test Program:	FMVSS 208 Compliance	Test Date:	7/16/15

Test Technician: <u>Vaclav Grym</u>

Complete one of these forms for **each** designated seating position that can be adjusted to forward-facing or that is a forward-facing seat, other than the driver's seat (S7.1.1.5(a), <u>and</u> that has seat belt retractors that are not solely automatic locking retractors. (S7.1.1.5(c))

Has	Scai	belt retractors that are not solely automatic locking retractors. (07.11.1.5(6))
DE	SIGN	ATED SEATING POSITION: Center Rear Passenger
X	1.	N/A – No retractor is at this position N/A – The retractor is an automatic locking retractor ONLY Record test fore-aft seat position: <b>FIXED</b> (S7.1.1.5(a)(1)) (Any position is acceptable)
X	2.	(S7.1.1.5(c)(1)) (Any position is acceptable)  Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does <b>NOT</b> have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part of the vehicle.  (S7.1.1.5(a))  X Yes – Pass
X	3.	No – Fail  Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does <b>NOT</b> require inverting, twisting or deforming of the belt webbing. (S7.1.1.5(a))  X  Yes – Pass No – Fail
X	4.	Place any adjustable seat belt anchorage in the lowest adjustment position.  X N/A The anchorage is not adjustable.
X X X	5. 6. 7.	Buckle the seat belt. (S7.1.1.5(c)(1))  Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))  Locate a reference point B on the attachment hardware or retractor assembly at the other end of the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))
X	8.	Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing?  X Yes (go to 8.1) No (go to 9)
Х	8.1	Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b))  X Yes – Pass No – Fail
X	9.	Adjust the lap belt or lap belt portion of the seat belt assembly according to any procedures recommended in the vehicle owner's manual to activate any locking feature

belt system. (S7.1.1.5(c)(2) & S7.1.1.5(c)(1))

so that the webbing between points A and B is at the maximum length allowed by the

- X 10. Measure and record the distance between points A and B along the longitudinal centerline of the webbing for the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))

  X Measured distance between A and B (inches): 70 1/4
- X 11. Readjust the belt system so that the webbing between points A and B is at ½ the maximum length of the webbing. (S7.1.1.5(c)(3))
- X 12. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device in Figure 5. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4))

  Measured force application angle: 10° (spec. 5 15 degrees)
- X
  13. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4))

  X
  Measured distance between A and B: 35 ¾ inches
  - 14. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))

Record onset rate: <u>15</u> lb/sec (spec. 10 to 50 lb/sec) (S7.1.1.5(c)(5)) Measured distance between A and B: <u>35 7/8</u> inches (S7.1.1.5(c)(6))

Let the seat belt webbing retract to its minimum length with the seat belt still buckled.
 To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device in Figure 5. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees

nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4))

Measured force application angle: \_\_10°\_\_ (spec. 5 - 15 degrees)

X 17. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (\$7.1.1.5(c)(4))

Measured distance between A and B: 12 3/4 inches

X 18. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))

Record onset rate: <u>15</u> lb/sec (spec. 10 to 50 lb/sec) (\$7.1.1.5(c)(5)) Measured distance between A and B: <u>12 7/8</u> inches (\$7.1.1.5(c)(6))

- X 19. Subtract the measurement in 13 from the measurement in 14 and the measurement in 17 from the measurement in 18. Is the difference 2 inches or less for both? (S7.1.1.5(c)(7))
- (S7.1.1.5(c)(7)) 14 - 13 =  $\frac{35}{7/8} - \frac{35}{4} = \frac{1}{8}$  inch; 18 - 17 =  $\frac{12}{7/8} - \frac{12}{4} = \frac{1}{8}$  inch Yes - Pass No - Fail

X 20.		
REMARK	(S:	
Signature	Voulor gryn	Date: <u>7/16/15</u>

### LAP BELT LOCKABILITY

Passenger cars, trucks, buses, and multipurpose passenger Vehicles with a GVWR of 10,000 pounds or less. (S7.1.1.5)

Test Vehicle:	<u>2015 Mazda 3</u>	NHTSA No.:	C20155402
Test Program:	FMVSS 208 Compliance	Test Date:	7/16/15

Test Technician: <u>Vaclav Grym</u>

Complete one of these forms for **each** designated seating position that can be adjusted to forward-facing or that is a forward-facing seat, other than the driver's seat (S7.1.1.5(a), <u>and</u> that has seat belt retractors that are not solely automatic locking retractors. (S7.1.1.5(c))

DES	SIGNA	ATED SEATING POSITION: Right Rear Passenger
		N/A – No retractor is at this position
		N/A – The retractor is an automatic locking retractor ONLY
X	1.	Record test fore-aft seat position: <b>FIXED</b>
<b>N</b>	•	(S7.1.1.5(c)(1)) (Any position is acceptable)
X	2.	Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does <b>NOT</b> have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part of the vehicle. (S7.1.1.5(a))  X Yes – Pass No – Fail
X	3.	Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does <b>NOT</b> require inverting, twisting or deforming of the belt webbing. (S7.1.1.5(a))  X Yes – Pass No – Fail
Χ	4.	Place any adjustable seat belt anchorage in the lowest adjustment position.  X N/A The anchorage is not adjustable.
X	5.	Buckle the seat belt. (S7.1.1.5(c)(1))
X	6.	Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))
X	7.	Locate a reference point B on the attachment hardware or retractor assembly at the other end of the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))
X	8.	Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing?  X Yes (go to 8.1) No (go to 9)
X	8.1	Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b))  X Yes – Pass No – Fail
X	9.	Adjust the lap belt or lap belt portion of the seat belt assembly according to any procedures recommended in the vehicle owner's manual to activate any locking feature so that the webbing between points A and B is at the maximum length allowed by the belt system. (S7.1.1.5(c)(2) & S7.1.1.5(c)(1))

- 10. Measure and record the distance between points A and B along the longitudinal centerline of the webbing for the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))Measured distance between A and B (inches): 68 Readjust the belt system so that the webbing between points A and B is at ½ the maximum length of the webbing. (S7.1.1.5(c)(3))To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds 12. using the webbing tension pull device in Figure 5. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (\$7.1.1.5(c)(4)) Measured force application angle: 10° (spec. 5 - 15 degrees) 13. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4))Measured distance between A and B: 41 1/4 inches Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5)) Record onset rate: <u>15</u> lb/sec (spec. 10 to 50 lb/sec) (S7.1.1.5(c)(5)) Measured distance between A and B: 41 ½ inches (S7.1.1.5(c)(6)) Let the seat belt webbing retract to its minimum length with the seat belt still buckled. 15. 16. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device in Figure 5. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (\$7.1.1.5(c)(4)) Measured force application angle: <u>10°</u> (spec. 5 - 15 degrees) 17. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4)) Measured distance between A and B: 23 inches Χ 18. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5)) Record onset rate: <u>15</u> lb/sec (spec. 10 to 50 lb/sec) (S7.1.1.5(c)(5)) Measured distance between A and B: <u>23 3/8</u> inches (S7.1.1.5(c)(6)) 19. Subtract the measurement in 13 from the measurement in 14 and the measurement in 17 from the measurement in 18. Is the difference 2 inches or less for both? (S7.1.1.5(c)(7))
- X
  14 13 =  $\frac{41 \frac{1}{2} 41 \frac{1}{4} = \frac{1}{4}}{1000}$  inch;
  18 17 =  $\frac{23 \frac{3}{8} 23 = \frac{3}{8}}{1000}$  inch

  X Yes Pass
  No Fail

X 20.	Subtract the measurement in 14 from the measurement in 10 and the measurement in 18 from the measurement in 10. Is the difference 3 inches or more for both? $ (S7.1.1.5(c)(8)) $ $ 10-14 = \underline{68-41 \frac{1}{2} = 26 \frac{1}{2}}                                 $
REMARK	S:

Date: <u>7/16/15</u>

I certify that I have read and performed each instruction.

Signature: \_

## FMVSS 208 SEAT BELT WARNING SYSTEM CHECK (S7.3)

				<u>/lazda 3</u> S 208 Compliar	200	NHTSA N Test Date		<u>402</u>
Test Technician:				Grym	<u>ice</u>	1651 Date	;. <u>1/10/13</u>	
•	000 100	71111010111. <u>va</u>	ioia v	<u> Crym</u>				
X	1.	The occup	ant	is in the driver's	s seat.			
Χ	2.	The seat b	elt is	s in the stowed	position.			
X	3.	The key is	in th	ne "on" or "start	" position.			
X	4.	The time d	lurat	ion of the audib	ole signal beginni	ng with key "on"	or "start" is	
X		_6_ sec	ond	S.				
X	5.	The occup	ant i	is in the driver's	s seat.			
X	6.			s in the stowed				
X	7.			ne "on" or "start	•			
X	8.	The time d	lurat	ion of the warn	ing light beginnin	g with key "on" o	r "start" is	
X				seconds.				
X	9.	The occup	ant	is in the driver's	s seat.			
X	10.	•			position and with	n at least 4 inche	s of belt webbir	ng
		extended.			•			Ū
X	11.	The key is	in th	ne "on" or "start	" position.			
X	12.	The time d	lurat	ion of the warn	ing light beginnin	g with key "on" o	r "start" is	
X		_0_ sec	ond	S.				
X	13.	Complete	the f	ollowing table v	with the data fron	n 4, 8, and 12 to	determine whic	h option
		is used.		· ·				•
				Marning light	Warning light	Audible signal	Audible signa	al
				Warning light	specification	Audible signal	specification	1*
	7.3	Belt stowed	&	Item 8:	60 seconds	Item 4: <u>6</u>	4 to 8 second	de
(a	)(1)	key on or sta		Stays On	minimum	11CH 4. <u>0</u>	+ to 0 3cconc	13
		Belt latched	&	Item 12: <u>0</u>	4 to 8			
	7.3	key on or sta	_		seconds			
(a	)(2)	Belt stowed	&	Item 8:	4 to 8	Item 4: 6	4 to 8 second	de l
		key on or sta		Stays On	seconds	_	+ to 0 3000110	10
Α	voluntary	audible signal after	the 4	llow an audible signa to 8 second required ngacre and Associate	Ito operate for more the signal may be provide	an 8 seconds. ed. It must be differenti	ated from the require	ed signal
	0/23/2001	legai interpretation	io Loi	igacie and Associate	55).			
X	14.	The seat be	elt w	arning system ı	meets the require	ements of (manuf	facturers may c	omply
		with either	secti	on).				
		X S7.3 (	a)(1	)				
		S7.3 (	a)(2	)				
		FAIL -	- Do	es NOT meet tl	he requirements	of either option.		
X	15.	Note wording	ng of	f visual warning	j: (S7.3(a)(1) and	l S7.3(a)(2))		
		Faster	n Se	at Belts				
		Faster	n Be	lts				
		X		)1 - 🐴 or 🤻				
		Symbo	oı 10	)] - <b>137</b> 0r <b>137</b>				
		FAIL -	- Do	es not use any	of the above wo	rding or symbol.		
R	REMAR	KS <sup>.</sup>						
1	certify t	hat I have rea	d an	d performed ea	ach instruction.			
		Voular	gru	~				
Signature:		e:	0/		Date: 7/16/15			

# **BELT CONTACT FORCE (\$7.4.3)**

Test	Vehicle: Program Technicia		NHTSA No.: Test Date:	C20155402 7/16/15
	oard desi	2 seat belts other than those in walk-in van-type ver gnated seating positions in passenger cars. Comp		
DES	IGNATE	SEATING POSITION: Left Rear Passenger		
X	1.	Does the vehicle incorporate a webbing tension- Yes (this form is complete) X No (continue with this check sheet)	relieving device?	
X	2.	Position the seat's adjustable lumbar supports so lowest, retracted or deflated adjustment position.  X N/A – No lumbar adjustment		support is in its
X	3.	Position any adjustable parts of the seat that pro they are in the lowest or most open adjustment p  X N/A – No additional support adjustment		• •
Χ	4.	Is the fore-aft position of the seat adjustable?  X No – go to 5 Yes – go to 4.1		
	4.1	Use all the seat controls that have any affect on seat to move the seat cushion to the rearmost po (8/31/95 legal interpretation to Hogan and Hartso	osition. Mark this	
	4.2	Use all the seat controls that have any affects or seat to move the seat cushion to the foremost po (8/31/95 legal interpretation to Hogan and Hartson	the fore-aft movesition. <b>Mark</b> this	
	4.3	Mark each fore-aft position so that there is a visual particular position. For manual seats, mark earnark only the rearmost, middle and foremost positions with the following: F for foremost, M for position, label the closest adjustment position to for rearmost. Determine the mid fore-aft seat polyand rearmost positions determined in items 4.1 a interpretation to Hogan and Hartson)	ual indication who nich detent. For p sitions. Label thi mid-position (if the the rear of the m sition based on t	oower seats, ree of the there is no mid- nid-point), and R he foremost
	4.4	Move the seat to the mid position.		
	4.5	While maintaining the mid position, move the sea seats with adjustable seat cushions, use the mar cushion angle for determining the lowest height p	nufacturer's reco	
X	5.	Is the seat back angle adjustable?  X No- go to 6 Yes- go to 5.1		
	5.1	Set and mark seat back angle, if adjustable, at the design riding position for a 50 <sup>th</sup> percentile adult not the manufacturer.  N/A – No seat back angle adjustment  Manufacturer's design seat back angle:		

Tested seat back angle:

X 6.	Is the seat a bucket seat?  Yes, go to 6.1 and skip 6.2
6.1	X No, go to 6.2 and skip 6.1 Bucket seats:
	Locate and mark the longitudinal centerline of the seat cushion. The intersection of the vertical longitudinal plane that passes through the SgRP and the seat cushion upper surface determines the longitudinal centerline of a bucket seat cushion. (S10.4.1.2 and S16.3.1.10)
X 6.2 6.2.1	Bench seats (complete ONLY the one that is applicable to the seat being tested):  Driver Seat
	Locate and <b>mark</b> the longitudinal line on the seat cushion that marks the intersection of the vertical longitudinal plane through the centerline of the steering wheel and the seat cushion upper surface. (S10.4.1.1)
6.2.2	Front Outboard Passenger Seat
	Locate and <b>mark</b> the longitudinal centerline of the passenger seat cushion. The longitudinal centerline is the same distance from the longitudinal centerline of the vehicle as the center of the steering wheel. (S10.4.1.1)
	Record the distance from the longitudinal centerline of the vehicle to the
	center of the steering wheel  Record the distance from the longitudinal centerline of the vehicle to the
	longitudinal centerline of the seat cushion.
X 6.2.3	Rear designated seating positions
	Locate and <b>mark</b> the longitudinal centerline of the seat cushion. The intersection of the vertical longitudinal plane that passes through the SgRP and the seat cushion upper surface determines the longitudinal centerline.
X 7.	Position the test dummies according to dummy position placement instructions in Appendix F. Complete the Appendix F check sheets, but include them in the test report ONLY if there is a test failure.
X 8.	Fasten the seat belt latch.
X 9.	Pull either 12 inches of belt webbing or the maximum available amount of belt webbing, whichever is less, from the retractor and then release it, allowing the belt webbing to return to the dummy's chest.
X 10.	Locate the point where the centerline of the upper torso belt webbing crosses the midsagittal line on the dummy's chest. At that point pull the belt webbing out 3 inches from the dummy's chest and release until it is within one inch from the dummy's chest. (S10.8) Using a force measuring gage with a full scale range of no more than 1.5 pounds, measure the contact force perpendicular to the dummy's chest exerted by the belt webbing.
X	Contact Force (lb): <b>0.6</b>
	X 0.0 to 0.7 pounds – Pass  Greater than 0.7 pounds - FAIL
REMARKS:	
Cianatura	Vouls gryn
Signature:	Date: <u>7/16/15</u>

## **BELT CONTACT FORCE (\$7.4.3)**

Test Vehicle: 2015 Mazda 3 NHTSA No.: C20155402
Test Program: FMVSS 208 Compliance
Test Technician: Vaclav Grym

NHTSA No.: C20155402
7/16/15

Test all Type 2 seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

DESIGNATED	SEATING POSITION:	Center Rear Passenger
X 1.	Does the vehicle incorpo	orate a webbing tension-relieving device?
X 2.	X No (continue with this Position the seat's adjust lowest, retracted or defla	s check sheet) table lumbar supports so that the lumbar support is in its ated adjustment position. (S8.1.3)
X 3.	they are in the lowest or	parts of the seat that provide additional support so that most open adjustment position. (S16.2.10.2)
X 4.	X N/A – No additional s Is the fore-aft position of X No – go to 5 Yes – go to 4.1	• • • •
4.1	Use all the seat controls seat to move the seat cu	that have any affect on the fore-aft movement of the shion to the rearmost position. <b>Mark</b> this position. ion to Hogan and Hartson)
4.2	Use all the seat controls seat to move the seat cu	that have any affects on the fore-aft movement of the shion to the foremost position. <b>Mark</b> this position. ion to Hogan and Hartson)
4.3	Mark each fore-aft positi a particular position. For mark only the rearmost, positions with the following position, label the closes for rearmost. Determine	on so that there is a visual indication when the seat is at a manual seats, <b>mark</b> each detent. For power seats, middle and foremost positions. Label three of the ng: F for foremost, M for mid-position (if there is no mid-tradjustment position to the rear of the mid-point), and R the mid fore-aft seat position based on the foremost determined in items 4.1 and 4.2. (8/31/95 legal
4.4	Move the seat to the mid	•
4.5	While maintaining the mi seats with adjustable sea	id position, move the seat to its lowest position. For at cushions, use the manufacturer's recommended seat hining the lowest height position.
X 5.	Is the seat back angle at X No- go to 6 Yes- go to 5.1	
5.1	Set and mark seat back a design riding position for the manufacturer.  N/A – No seat back a	n seat back angle:

X	6.	Is the seat a bucket seat?  Yes, go to 6.1 and skip 6.2  X No, go to 6.2 and skip 6.1
	6.1	Bucket seats:  Locate and mark the longitudinal centerline of the seat cushion. The intersection of the vertical longitudinal plane that passes through the SgRP and the seat cushion upper surface determines the longitudinal centerline of a bucket seat cushion. (S10.4.1.2 and S16.3.1.10)
X	6.2 6.2.1	Bench seats (complete ONLY the one that is applicable to the seat being tested): Driver Seat  Locate and <b>mark</b> the longitudinal line on the seat cushion that marks the intersection of the vertical longitudinal plane through the centerline of the steering wheel and the seat cushion upper surface. (S10.4.1.1)
	6.2.2	Front Outboard Passenger Seat Locate and <b>mark</b> the longitudinal centerline of the passenger seat cushion. The longitudinal centerline is the same distance from the longitudinal centerline of the vehicle as the center of the steering wheel. (S10.4.1.1)  Record the distance from the longitudinal centerline of the vehicle to the center of the steering wheel.  Record the distance from the longitudinal centerline of the vehicle to the longitudinal centerline of the seat cushion.
X	6.2.3	Rear designated seating positions  Locate and <b>mark</b> the longitudinal centerline of the seat cushion. The intersection of the vertical longitudinal plane that passes through the SgRP and the seat cushion upper surface determines the longitudinal centerline.
X	7.	Position the test dummies according to dummy position placement instructions in Appendix F. Complete the Appendix F check sheets, but include them in the test report ONLY if there is a test failure.
X	8.	Fasten the seat belt latch.
X	9.	Pull either 12 inches of belt webbing or the maximum available amount of belt webbing, whichever is less, from the retractor and then release it, allowing the belt webbing to return to the dummy's chest.
X	10.	Locate the point where the centerline of the upper torso belt webbing crosses the midsagittal line on the dummy's chest. At that point pull the belt webbing out 3 inches from the dummy's chest and release until it is within one inch from the dummy's chest. (S10.8) Using a force measuring gage with a full scale range of no more than 1.5 pounds, measure the contact force perpendicular to the dummy's chest exerted by the belt webbing.
X		Contact Force (lb): 0.5  X 0.0 to 0.7 pounds – Pass  Greater than 0.7 pounds - FAIL
REMA	ARKS:	
Signa	ture:	Voular gryn Date: 7/16/15

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## **BELT CONTACT FORCE (\$7.4.3)**

NHTSA No.: <u>C20155402</u>

2015 Mazda 3

Test Vehicle:

	rogram: echnicia		Test Date:	<u>7/16/15</u>
	ard desig	2 seat belts other than those in walk-in var gnated seating positions in passenger care		
DESIG	NATED	SEATING POSITION: Right Rear Pas	ssenger	
220.0		rught todi i de	20011g0.	
X	1.	Does the vehicle incorporate a webbing to Yes (this form is complete)  X No (continue with this check sheet)	tension-relieving device?	)
X	2.	Position the seat's adjustable lumbar sup lowest, retracted or deflated adjustment positions. N/A – No lumbar adjustment	•	support is in its
X	3.	Position any adjustable parts of the seat they are in the lowest or most open adjust N/A – No additional support adjustme	stment position. (S16.2.1	
X	4.	Is the fore-aft position of the seat adjusta  X No – go to 5 Yes – go to 4.1		
	4.1	Use all the seat controls that have any af seat to move the seat cushion to the real (8/31/95 legal interpretation to Hogan and	rmost position. Mark thi	
	4.2	Use all the seat controls that have any af seat to move the seat cushion to the fore (8/31/95 legal interpretation to Hogan and	ffects on the fore-aft movernost position. <b>Mark</b> this	
	4.3	Mark each fore-aft position so that there a particular position. For manual seats, I mark only the rearmost, middle and forer positions with the following: F for foremost position, label the closest adjustment posfor rearmost. Determine the mid fore-aft and rearmost positions determined in iter interpretation to Hogan and Hartson)	mark each detent. For prost positions. Label the st, M for mid-position (if sition to the rear of the magest position based on the m	oower seats, ree of the there is no mid- nid-point), and R the foremost
	4.4	Move the seat to the mid position.		
	4.5	While maintaining the mid position, move seats with adjustable seat cushions, use cushion angle for determining the lowest	the manufacturer's reco	
X	5.	Is the seat back angle adjustable?  X No- go to 6 Yes- go to 5.1		
	5.1	Set and mark seat back angle, if adjustal design riding position for a 50 <sup>th</sup> percentile the manufacturer.  N/A – No seat back angle adjustment	e adult male in the mann	

Manufacturer's design seat back angle: \_\_\_\_\_

Tested seat back angle:

X	6.	Is the seat a bucket seat?  Yes, go to 6.1 and skip 6.2  X No, go to 6.2 and skip 6.1
	6.1	Bucket seats:  Locate and mark the longitudinal centerline of the seat cushion. The intersection of the vertical longitudinal plane that passes through the SgRP and the seat cushion upper surface determines the longitudinal centerline of a bucket seat cushion. (S10.4.1.2 and S16.3.1.10)
X	6.2	Bench seats (complete ONLY the one that is applicable to the seat being tested):
	6.2.1	Driver Seat  Locate and <b>mark</b> the longitudinal line on the seat cushion that marks the intersection of the vertical longitudinal plane through the centerline of the steering wheel and the seat cushion upper surface. (S10.4.1.1)
	6.2.2	Front Outboard Passenger Seat Locate and mark the longitudinal centerline of the passenger seat cushion. The longitudinal centerline is the same distance from the longitudinal centerline of the vehicle as the center of the steering wheel. (S10.4.1.1)  Record the distance from the longitudinal centerline of the vehicle to the center of the steering wheel.  Record the distance from the longitudinal centerline of the vehicle to the longitudinal centerline of the seat cushion.
X	6.2.3	Rear designated seating positions  Locate and <b>mark</b> the longitudinal centerline of the seat cushion. The intersection of the vertical longitudinal plane that passes through the SgRP and the seat cushion upper surface determines the longitudinal centerline.
X	7.	Position the test dummies according to dummy position placement instructions in Appendix F. Complete the Appendix F check sheets, but include them in the test report ONLY if there is a test failure.
X	8. 9.	Fasten the seat belt latch.  Pull either 12 inches of belt webbing or the maximum available amount of belt webbing, whichever is less, from the retractor and then release it, allowing the belt webbing to return to the dummy's cheet.
X	10.	belt webbing to return to the dummy's chest.  Locate the point where the centerline of the upper torso belt webbing crosses the midsagittal line on the dummy's chest. At that point pull the belt webbing out 3 inches from the dummy's chest and release until it is within one inch from the dummy's chest. (S10.8) Using a force measuring gage with a full scale range of no more than 1.5 pounds, measure the contact force perpendicular to the dummy's chest exerted by the belt webbing.
X		Contact Force (lb): 0.6  X  0.0 to 0.7 pounds – Pass  Greater than 0.7 pounds - FAIL
REM	ARKS:	
Signature: _		Voular gryn Date: 7/16/15

### **LATCH PLATE ACCESS (S7.4.4)**

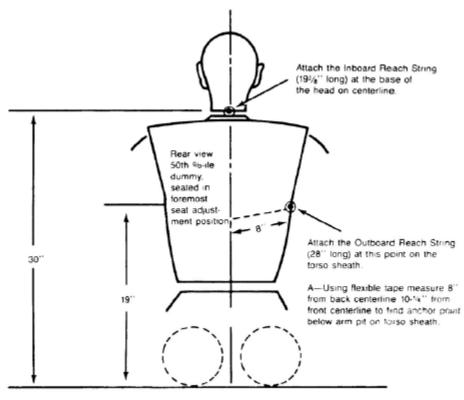
Test Vehicle:2015 Mazda 3NHTSA No.:C20155402Test Program:FMVSS 208 ComplianceTest Date:7/16/15

Test Technician: Vaclav Grym

Test all front outboard seat belts **other than those in** walk-in van-type vehicles and those at front outboard designated seating positions in **passenger cars**. Complete a form for each applicable seat belt.

DESIGNATED SEATING POSITION: Not Applicable For Any Position - Passenger Car		
1	. Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S8.1.3)	
	N/A – No lumbar adjustment Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S16.2.10.2)	
3	N/A – No additional support adjustment  Is the fore-aft position of the seat adjustable?  No – go to 4	
3	to move the seat cushion to the rearmost position. Mark this position. (8/31/95	
3	legal interpretation to Hogan and Hartson)  While maintaining the forward most position, move the seat to its lowest position.  For seats with adjustable seat cushions, use the manufacturer's recommended	
	seat cushion angle for determining the lowest height position.  Is the seat back angle adjustable?  No- go to 5	
4	Yes- go to 4.1  Set and mark seat back angle, if adjustable, at the manufacturer's nominal design riding position for a <b>50</b> <sup>th</sup> <b>percentile adult male</b> in the manner specified by the manufacturer.	
	N/A – No seat back angle adjustment  Manufacturer's design seat back angle:  Tested seat back angle:	
Ę	Is the seat a bucket seat?  Yes, go to 5.1 and skip 5.2  No, go to 5.2 and skip 5.1	
5		
5.2	the seat cushion upper surface determines the longitudinal centerline of a bucket seat cushion. (S10.4.1.2 and S16.3.1.10)  Bench seats (complete ONLY the one that is applicable to the seat being tested):	
	intersection of the vertical longitudinal plane through the centerline of the steering wheel and the seat cushion upper surface. (S10.4.1.1)	

5.2.2	Front Outboard Passenger Seat
<u> </u>	Locate and mark the longitudinal centerline of the passenger seat cushion.
	The longitudinal centerline is the same distance from the longitudinal centerline
	of the vehicle as the center of the steering wheel. (S10.4.1.1)
	Record the distance from the longitudinal centerline of the vehicle to the center
	of the steering wheel
	Record the distance from the longitudinal centerline of the vehicle to the
	longitudinal centerline of the seat cushion
6.	Position the test dummy using the procedures in Appendix F. (Some
	modifications to the positioning procedure may need to be made because the seat
	is in the forward most position. Note on the Appendix F positioning check sheet
	any deviations necessary to position the Part 572, Subpart E dummy). Complete
	the Appendix F check sheets, but include them in the test report ONLY if there is a test failure.
7.	Position the adjustable seat belt anchorage in the manufacturer's nominal design
7.	position for a 50 <sup>th</sup> percentile adult male occupant.
8.	Attach the inboard reach string to the base of the head following the instructions
0.	on Figure 3.
9.	Attach the outboard reach string to the torso sheath following the instructions on
<u> </u>	Figure 3.
10.	Place the latch plate in the stowed position.
11.	Extend the inboard reach string in front of the dummy and then backward and
	outboard to the latch plate to generate arcs of the reach envelope of the test
	dummy's arms. Is the latch plate within the reach envelope?
	Yes – Pass
	No
12.	Extend the outboard reach string in front of the dummy and then backward and
	outboard to the latch plate to generate arcs of the reach envelope of the test
	dummy's arms. Is the latch plate within the reach envelope?
	Yes – Pass
	No
13.	Is the latch plate within the inboard (item 11) or outboard (item 12) reach
	envelope?
	Yes – Pass
	No – Fail
14.	Using the clearance test block, specified in Figure 4, is there sufficient clearance
	between the vehicle seat and the side of vehicle interior to allow the test block to
	move unhindered to the latch plate or buckle?
	Yes – Pass
	No – Fail
REMARKS:	
NEIWAKNO.	
	Voular gryn Date: 7/16/15
Signature: _	Date: <u>7/16/15</u>



Seat Plane is 90° to the Torso Line

Figure 3. Location of Anchoring Points for Latchplate Reach Limiting Chains or Strings to Test for Latchplate Accessibility Using Subpart E Test Device

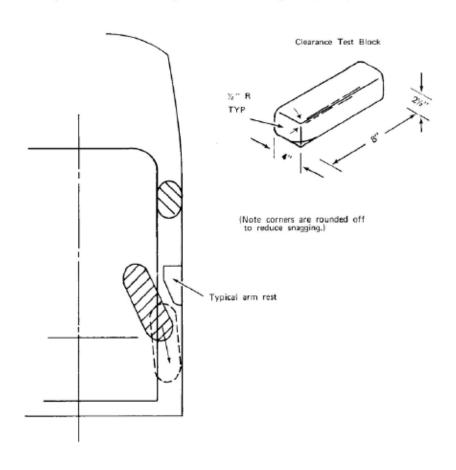


Figure 4-USE OF CLEARANCE TEST BLOCK TO DETERMINE HAND/ARM ACCESS

### **SEAT BELT RETRACTION (S7.4.5)**

Test Vehicle:2015 Mazda 3NHTSA No.:C20155402Test Program:FMVSS 208 ComplianceTest Date:7/16/15

Test Technician: Vaclav Grym

Test all front outboard seat belts, except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

	DES	IGNATED SEATING POSITION: Not Applicable For Any Position – Passenger Car
X	1.	Is the vehicle a passenger car or walk-in van-type vehicle?
	••	X Yes, this form is complete
	•	No
	2.	Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S8.1.3)
	•	N/A – No lumbar adjustment
	3.	Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S16.2.10.2)
		N/A – No additional support adjustment
	4.	Is the fore-aft position of the seat adjustable?
		No – go to 5
	4.4	Yes – go to 4.1
	4.1	Use all the seat controls that have any affect on the fore-aft movement of the seat to move the seat cushion to the rearmost position. <b>Mark</b> this position. (8/31/95 legal interpretation to Hogan and Hartson)
	4.2	Use all the seat controls that have any affects on the fore-aft movement of the seat to move the
	7.2	seat cushion to the foremost position. <b>Mark</b> this position. (8/31/95 legal interpretation to Hoga and Hartson)
	4.3	<b>Mark</b> each fore-aft position so that there is a visual indication when the seat is at a particular position. For manual seats, <b>mark</b> each detent. For power seats, mark only the rearmost, middle and foremost positions. Label three of the positions with the following: F for foremost, M for mid-position (if there is no mid-position, label the closest adjustment position to the rear of the mid-point), and R for rearmost. Determine the mid fore-aft seat position based on the foremost and rearmost positions determined in items 4.1 and 4.2. (8/31/95 legal interpretation
		to Hogan and Hartson)
	4.4	Move the seat to the mid position.
	4.5	While maintaining the mid position, move the seat to its lowest position. For seats with adjustable seat cushions, use the manufacturer's recommended seat cushion angle for determining the lowest height position.
	5.	Is the seat back angle adjustable?
		No- go to 6 Yes- go to 5.1
	5.1	Set and mark seat back angle, if adjustable, at the manufacturer's nominal design riding position for a <b>50</b> <sup>th</sup> <b>percentile adult male</b> in the manner specified by the manufacturer.
		N/A – No seat back angle adjustment
		Manufacturer's design seat back angle:
		Tested seat back angle:
	6.	Is the seat a bucket seat?
	٥.	Yes, go to 6.1 and skip 6.2
		No. go to 6.2 and skip 6.1

	6.1	Bucket Seats:
		Locate and mark the longitudinal centerline of the seat cushion. The intersection of the vertical
		longitudinal plane that passes through the SgRP and the seat cushion upper surface
		determines the longitudinal centerline of a bucket seat cushion. (S10.4.1.2 and S16.3.1.10)
	6.2	Bench seats (complete ONLY the one that is applicable to the seat being tested):
	6.2.	Driver Seat
	 1	Locate and mark the longitudinal line on the seat cushion that marks the intersection of the
		vertical longitudinal plane through the centerline of the steering wheel and the seat cushion
		upper surface. (S10.4.1.1)
	6.2.	Front Outboard Passenger Seat
	2	Locate and mark the longitudinal centerline of the passenger seat cushion. The
		longitudinal centerline is the same distance from the longitudinal centerline of the vehicle as
		the center of the steering wheel. (S10.4.1.1)
		Record the distance from the longitudinal centerline of the vehicle to the center of the
		steering wheel
		Record the distance from the longitudinal centerline of the vehicle to the longitudinal
		centerline of the seat cushion
	7.	Position the Part 572 Subpart E test dummy according to dummy position placement
		instructions in Appendix F. Complete the Appendix F check sheets, but include them in
1		the test report ONLY if there is a test failure.
	8.	Fasten the seat belt around the dummy.
	9.	Remove all slack from the lap belt portion. (S10.9)
1		N/A, the seat does not have a fore-aft adjustment
	10.	Pull the upper torso webbing out of the retractor and allow it to retract; repeat this four times.
1		(S10.9)
	11.	Apply a 2 to 4 pound tension load to the lap belt. (S10.9)
		Pound load applied:
	12.	Is the belt system equipped with a tension relieving device?
		Yes, continue
1		No, go to 14
	13.	Introduce the maximum amount of slack into the upper torso belt that is recommended by the
1		vehicle manufacturer in the vehicle owner's manual. (S10.9).
	14.	Check the statement that applies to this test vehicle:
	14.1	The torso and lap belt webbing of the seat belt system automatically retracts to a stowed
		position when the adjacent vehicle door is in an open position and the seat belt latch plate is
		released.
		Yes – Pass go to 16
1	440	No – go to 14.2
	14.2	The torso and lap belt webbing of the seat belt system automatically retracts when the seat belt
		latch plate is released.
		Yes – Pass go to 15
1	4.4.0	No – go to 14.3
	14.3	Neither 14.1 nor 14.2 apply.
1		Fail
ļ	15.	With the webbing and hardware in the stowed position are the webbing and hardware
		prevented from being pinched when the door is closed?
		Yes – Pass
		No – Fail

	16.	6. If this test vehicle has an open body (without doors) and has a belt system with a tens relieving device, does the belt system fully retract when the tension-relieving device is deactivated? N/A – Not an open body vehicle Yes – Pass No – Fail	
F	REMA	ARKS:	
(	Signa	Vouhr gryn- ature:	Date: <u>7/16/15</u>

### **SEAT BELT GUIDES AND HARDWARE (\$7.4.6)**

Test Vehicle:	2015 Mazda 3	NHTSA No.:	C20155402
Test Program:	FMVSS 208 Compliance	Test Date:	7/16/15
Test Technician:	Vaclav Grym		

Test seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

DESIG	SNATE	D SEATING POSITION: Left Rear Passenger
X	1.	Is the seat cushion movable so that the seat back serves a function other than seating? (S7.4.6.1(b))
X	2.	Yes, this form is complete X No, go to 2  Is the seat removable? (S7.4.6.1(b))
		Yes, this form is complete X No, go to 3
X	3.	Is the seat movable so that the space formerly occupied by the seat can be used for a secondary function? (S7.4.6.1(b))
V	4	Yes, this form is complete X No, go to 4
X	4.	Is the webbing designed to pass through the seat cushion or between the seat
		cushion and seat back? (S7.4.6.1(a))  Yes, go to 5  X  No, this form is complete
	5.	Does one of the following three parts, the seat belt latch plate, the buckle, or the
	0.	seat belt webbing, stay on top of or above the seat cushion under normal
		conditions (i.e., conditions other than when belt hardware is intentionally pushed
		behind the seat by a vehicle occupant)? (S7.4.6.1(a))
		Yes – Pass No – Fail
		Identify the part(s) on top or above the seat.
		Seat belt latch plate Buckle Seat belt webbing
	6.	Are the remaining two seat belt parts accessible under normal conditions?
	7	Yes – Pass No – Fail
	7.	The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the belt is completely retracted or, if the belt is
		nonretractable, the belt is unlatched. (\$7.4.6.2)
		Yes – Pass No – Fail
	8.	The buckle and latch plate do not pass through the guides or conduits provided
		and fall behind the seat when the seat is moved to any position to which it is
		designed to be adjusted. (S7.4.6.2)
		Yes – Pass No – Fail
	9.	The buckle and latch plate do not pass through the guides or conduits provided
		and fall behind the seat when the seat back, if foldable, is folded forward as far as
		possible and then moved backward into position. (\$7.4.6.2)
	40	Yes – Pass No – Fail
	10.	Is the inboard receptacle end of the seat belt assembly, installed in the front
		outboard designated seating position, accessible with the center armrest in any position to which it can be adjusted (without moving the armrest)? (S7.4.6.2)
		Yes – Pass No – Fail N/A – Rear seat
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REMA	RKS:	
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Signat	urΔ.	Vaulor gryn Date: 7/16/15
Signal	ui <del>c</del>	Date. <u>1/10/15</u>

### **SEAT BELT GUIDES AND HARDWARE (S7.4.6)**

Test Vehicle: 2015 Mazda 3 NHTSA No.: C20155402 Test Program: FMVSS 208 Compliance Test Date: 7/16/15

Test Technician: Vaclav Grym

Test seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

DESIGNATED SEATING POSITION: Center Rear Passenger		
X	1.	Is the seat cushion movable so that the seat back serves a function other than seating? (S7.4.6.1(b))
X	2.	Yes, this form is complete  Is the seat removable? (S7.4.6.1(b))
		Yes, this form is complete X No, go to 3
X	3.	Is the seat movable so that the space formerly occupied by the seat can be used for a secondary function? (\$7.4.6.1(b))
V	4	Yes, this form is complete X No, go to 4
X	4.	Is the webbing designed to pass through the seat cushion or between the seat cushion and seat back? (S7.4.6.1(a))
		X Yes, go to 5 No, this form is complete
X	5.	Does one of the following three parts, the seat belt latch plate, the buckle, or the
	0.	seat belt webbing, stay on top of or above the seat cushion under normal
		conditions (i.e., conditions other than when belt hardware is intentionally pushed
		behind the seat by a vehicle occupant)? (S7.4.6.1(a))
		X Yes – Pass No – Fail
		Identify the part(s) on top or above the seat.
V	0	X Seat belt latch plate X Buckle X Seat belt webbing
X	6.	Are the remaining two seat belt parts accessible under normal conditions?  X Yes – Pass  No – Fail
X	7.	The buckle and latch plate do not pass through the guides or conduits provided
Λ	٠.	and fall behind the seat when the belt is completely retracted or, if the belt is
		nonretractable, the belt is unlatched. (\$7.4.6.2)
		X Yes – Pass No – Fail
X	8.	The buckle and latch plate do not pass through the guides or conduits provided
		and fall behind the seat when the seat is moved to any position to which it is
		designed to be adjusted. (S7.4.6.2)
	•	X Yes – Pass No – Fail
X	9.	The buckle and latch plate do not pass through the guides or conduits provided
		and fall behind the seat when the seat back, if foldable, is folded forward as far as possible and then moved backward into position. (\$7.4.6.2)
		X Yes – Pass No – Fail
X	10.	Is the inboard receptacle end of the seat belt assembly, installed in the front
		outboard designated seating position, accessible with the center armrest in any
		position to which it can be adjusted (without moving the armrest)? (S7.4.6.2)
		Yes – Pass No – Fail X N/A – Rear seat
5	5170	
REMA	AKKS:	
		Vaulor gryn
Signature:		Date: <u>7/16/15</u>

### **SEAT BELT GUIDES AND HARDWARE (\$7.4.6)**

Test Vehicle:	2015 Mazda 3	NHTSA No.:	C20155402
Test Program:	FMVSS 208 Compliance	Test Date:	7/16/15
Test Technician:	Vaclav Grym		

Test seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

DESIGNAT	ED SEATING POSITION: Right Rear Passenger
X 1.	Is the seat cushion movable so that the seat back serves a function other than seating? (S7.4.6.1(b))
X 2.	Yes, this form is complete  Is the seat removable? (S7.4.6.1(b))
	Yes, this form is complete X No, go to 3
X 3.	Is the seat movable so that the space formerly occupied by the seat can be used for a secondary function? (S7.4.6.1(b))
	Yes, this form is complete X No, go to 4
X 4.	Is the webbing designed to pass through the seat cushion or between the seat
	cushion and seat back? (S7.4.6.1(a))
	Yes, go to 5  X No, this form is complete
5.	Does one of the following three parts, the seat belt latch plate, the buckle, or the
	seat belt webbing, stay on top of or above the seat cushion under normal conditions (i.e., conditions other than when belt hardware is intentionally pushed
	behind the seat by a vehicle occupant)? (S7.4.6.1(a))
	Yes – Pass No – Fail
	Identify the part(s) on top or above the seat.
	Seat belt latch plate Buckle Seat belt webbing
6.	Are the remaining two seat belt parts accessible under normal conditions?
	Yes – Pass No – Fail
7.	The buckle and latch plate do not pass through the guides or conduits provided
	and fall behind the seat when the belt is completely retracted or, if the belt is
	nonretractable, the belt is unlatched. (S7.4.6.2)
	Yes – Pass No – Fail
8.	The buckle and latch plate do not pass through the guides or conduits provided
	and fall behind the seat when the seat is moved to any position to which it is
	designed to be adjusted. (S7.4.6.2)
	Yes – Pass No – Fail
9.	The buckle and latch plate do not pass through the guides or conduits provided
	and fall behind the seat when the seat back, if foldable, is folded forward as far as possible and then moved backward into position. (S7.4.6.2)
	Yes – Pass No – Fail
10.	Is the inboard receptacle end of the seat belt assembly, installed in the front
10.	outboard designated seating position, accessible with the center armrest in any
	position to which it can be adjusted (without moving the armrest)? (S7.4.6.2)
	Yes – Pass No – Fail N/A – Rear seat
REMARKS:	
	Willy and
Signature:	Vouls- gryn- Date: 7/16/15
Signature	Date. <u>1/10/15</u>

## **AIR BAG SUPPRESSION TELLTALE (S19.2.2)**

	ehicle:	2015 Mazda 3	NHTSA No.:	C20155402			
	rogram:	FMVSS 208 Compliance	Test Date:	<u>7/20/15</u>			
Test T	echnician:	Vaclav Grym					
<u>X</u> 1.	X Yes - go	cle certified to any suppression perfo to 2 form is complete	rmance standards of FM	VSS 208?			
<u>X</u> 2.	Does tellta	le emit yellow light when the air bag ssNO - FAIL	is suppressed? (S19.2.2	(a))			
X 3.		rds "PASSENGER AIR BAG OFF" o	r "PASS AIR BAG OFF"	(S19.2.2 (b))			
<u>X</u> 3. <u>X</u> 3.1		ale? (S19.2.2 (b))		(			
	X Yes - Pa	X Yes - Pass, go to 4					
	No - go t						
	_Yes - Pa						
<u>X</u> 4.	X Yes - Pa	le separate from the air bag readines ssNO - FAIL	` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` `				
<u>X</u> 5.		le within the interior of the vehicle? ( ss NO - FAIL	S19.2.2 (d))				
<u>X</u> 6		le forward of and above the design F	I-point of both the driver'	s and the front			
<u> </u>	outboard p (S19.2.2 (c	assenger's seat when the seats are					
		ssNO - FAIL					
<u>X</u> 7.	of objects to passenger	le away from surfaces that can be us that could obscure the telltale from eind of some in the could obscure the telltale from eind of the could be used to					
		ssNO - FAIL					
<u>X</u> 8.	passenger passenger	le located so that it is not obscured f by a rear-facing child restraint in App seat? (S19.2.2 (d)) ssNO - FAIL					
<u>X</u> 9.	Is the tellta	le visible or recognizable during the	night? (S19.2.2 (e))				
<u>X</u> 10.	Is the tellta	ssNO - FAIL le visible or recognizable during the	day? (S19.2.2 (e))				
		ssNO - FAIL					
<u>X</u> 11.		a visibility adjustment, do all the adjust	stment levels make the te	elitale visible and			
	•	ole? (S19.2.2 (g))					
		visibility adjustment Pass <b>NO - FAIL</b>					
<u>X</u> 12.		elltale remain illuminated while the ai	r hag is suppressed? (S1	19 2 2 (h))			
<u>/                                    </u>		air bag suppressed for 5 minutes.)	i bag io oapproceda. (O	10.2.2 (11))			
		ssNO - FAIL					
<u>X</u> 13.		le off while the air bag is activated?	(S19.2.2 (h)) (Leave the	air bag activated			
	for 5 minut			-			
	X Yes - Pa	ssNO - FAIL					
O! 1	Va	the gran	Data: 7/00/45				
Signat	ure:		Date: <u>7/20/15</u>				

Suppression Test Using 12-Month-Old CRABI Dummy (Part 572, Subpart R)
Section B Rear Facing CRS

NHTSA NO.:	C20155402	TEST DATE:	7/21/15
LABORATORY:	MGA	TECHNICIAN(S):	VG
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	062

CHILD RESTRAINT NAME:	Cosco
CHILD RESTRAINT MODEL:	Arriva 22-049 (same as model 22-013)
DATE OF MANUFACTURE:	8-20-2008

Base: X On Off N/A-Restraint does not have a removable base

Manufacturer's design seat back angle: 5.0° on Head Rest Pole 5.7° on Head Rest Pole

Manufacturer's specified anchorage position: Upper-most as 0
Tested anchorage position: Upper-most as 0

A blanket and visor were not used in the suppression testing because they did not affect the weight sensing system used on the vehicle.

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward 9*	129	Suppressed
Rear	Middle	131	Suppressed
Facing	Rearward	131	Suppressed
Unbelted	Forward 11*	N/A	Suppressed
Rear	Middle	N/A	Suppressed
Facing	Rearward	N/A	Suppressed
Unbelted	Forward 8*	N/A	Suppressed
Forward	Middle	N/A	Suppressed
Facing	Rearward	N/A	Suppressed

<sup>\*</sup> The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft detent position with respect to the foremost position. (1 = Full Forward; 26 = Full Rearward; 26 total Seat Slide detents)

Suppression Test Using 12-Month-Old CRABI Dummy (Part 572, Subpart R)
Section B Rear Facing CRS

NHTSA NO.:	C20155402	TEST DATE:	7/21/15
LABORATORY:	MGA	TECHNICIAN(S):	VG
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	062

CHILD RESTRAINT NAME:	Cosco
CHILD RESTRAINT MODEL:	Arriva 22-049 (same as model 22-013)
DATE OF MANUFACTURE:	8-20-2008

Base: \_\_On \_X Off \_\_\_N/A-Restraint does not have a removable base

Manufacturer's design seat back angle: 5.0° on Head Rest Pole 5.7° on Head Rest Pole

Manufacturer's specified anchorage position: Upper-most as 0
Tested anchorage position: Upper-most as 0
Upper-most as 0

A blanket and visor were not used in the suppression testing because they did not affect the weight sensing system used on the vehicle.

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward 11*	131	Suppressed
Rear	Middle	132	Suppressed
Facing	Rearward	133	Suppressed
Unbelted	Forward 12*	N/A	Suppressed
Rear	Middle	N/A	Suppressed
Facing	Rearward	N/A	Suppressed
Unbelted	Forward 11*	N/A	Suppressed
Forward	Middle	N/A	Suppressed
Facing	Rearward	N/A	Suppressed

<sup>\*</sup> The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft detent position with respect to the foremost position. (1 = Full Forward; 26 = Full Rearward; 26 total Seat Slide detents)

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Middle position. (SN 506)

Suppression Test Using 12-Month-Old CRABI Dummy (Part 572, Subpart R)
Section B Rear Facing CRS

NHTSA NO.:	C20155402	TEST DATE:	7/21/15
LABORATORY:	MGA	TECHNICIAN(S):	VG
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	062

CHILD RESTRAINT NAME:	Graco
CHILD RESTRAINT MODEL:	Snugride
DATE OF MANUFACTURE:	5-24-2007

Base: \_\_X\_On \_\_Off \_\_\_N/A-Restraint does not have a removable base

Manufacturer's design seat back angle: 5.0° on Head Rest Pole 5.7° on Head Rest Pole

Manufacturer's specified anchorage position: Upper-most as 0
Tested anchorage position: Upper-most as 0
Upper-most as 0

A blanket and visor were not used in the suppression testing because they did not affect the weight sensing system used on the vehicle.

**Test Summary** 

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward 4*	128	Suppressed
Rear	Middle	132	Suppressed
Facing	Rearward	131	Suppressed
Unbelted	Forward 4*	N/A	Suppressed
Rear	Middle	N/A	Suppressed
Facing	Rearward	N/A	Suppressed
Unbelted	Forward 5*	N/A	Suppressed
Forward	Middle	N/A	Suppressed
Facing	Rearward	N/A	Suppressed

<sup>\*</sup> The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft detent position with respect to the foremost position. (1 = Full Forward; 26 = Full Rearward; 26 total Seat Slide detents)

Suppression Test Using 12-Month-Old CRABI Dummy (Part 572, Subpart R)
Section B Rear Facing CRS

NHTSA NO.:	C20155402	TEST DATE:	7/21/15
LABORATORY:	MGA	TECHNICIAN(S):	VG
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	062

CHILD RESTRAINT NAME:	Graco
CHILD RESTRAINT MODEL:	Snugride
DATE OF MANUFACTURE:	5-24-2007

Base: \_\_On X Off \_\_N/A-Restraint does not have a removable base

Manufacturer's design seat back angle: 5.0° on Head Rest Pole 5.7° on Head Rest Pole

Manufacturer's specified anchorage position: Upper-most as 0
Tested anchorage position: Upper-most as 0
Upper-most as 0

A blanket and visor were not used in the suppression testing because they did not affect the weight sensing system used on the vehicle.

**Test Summary** 

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward 11*	133	Suppressed
Rear	Middle	129	Suppressed
Facing	Rearward	132	Suppressed
Unbelted	Forward 11*	N/A	Suppressed
Rear	Middle	N/A	Suppressed
Facing	Rearward	N/A	Suppressed
Unbelted	Forward 6*	N/A	Suppressed
Forward	Middle	N/A	Suppressed
Facing	Rearward	N/A	Suppressed

<sup>\*</sup> The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft detent position with respect to the foremost position. (1 = Full Forward; 26 = Full Rearward; 26 total Seat Slide detents)

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Rearward position. (SN 506)

Suppression Test Using 12-Month-Old CRABI Dummy (Part 572, Subpart R)
Section B Rear Facing CRS

NHTSA NO.:	C20155402	TEST DATE:	7/21/15
LABORATORY:	MGA	TECHNICIAN(S):	VG
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	062

CHILD RESTRAINT NAME:	Peg Perego
CHILD RESTRAINT MODEL:	Viaggio
DATE OF MANUFACTURE:	8-27-2007

Base: X On Off N/A-Restraint does not have a removable base

Manufacturer's design seat back angle: 5.0° on Head Rest Pole 5.7° on Head Rest Pole

Manufacturer's specified anchorage position: Upper-most as 0
Tested anchorage position: Upper-most as 0
Upper-most as 0

A blanket and visor were not used in the suppression testing because they did not affect the weight sensing system used on the vehicle.

**Test Summary** 

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Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward 6*	128	Suppressed
Rear	Middle	129	Suppressed
Facing	Rearward	129	Suppressed
Unbelted	Forward 6*	N/A	Suppressed
Rear	Middle	N/A	Suppressed
Facing	Rearward	N/A	Suppressed
Unbelted	Forward 3*	N/A	Suppressed
Forward	Middle	N/A	Suppressed
Facing	Rearward	N/A	Suppressed

<sup>\*</sup> The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft detent position with respect to the foremost position. (1 = Full Forward: 26 = Full Rearward: 26 total Seat Slide detents)

Suppression Test Using 12-Month-Old CRABI Dummy (Part 572, Subpart R)
Section B Rear Facing CRS

NHTSA NO.:	C20155402	TEST DATE:	7/21/15
LABORATORY:	MGA	TECHNICIAN(S):	VG
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	062

CHILD RESTRAINT NAME:	Peg Perego
CHILD RESTRAINT MODEL:	Viaggio
DATE OF MANUFACTURE:	8-27-2007

Base: \_\_On \_X \_Off \_\_N/A-Restraint does not have a removable base

Manufacturer's design seat back angle: 5.0° on Head Rest Pole 5.7° on Head Rest Pole

Manufacturer's specified anchorage position: Upper-most as 0
Tested anchorage position: Upper-most as 0

A blanket and visor were not used in the suppression testing because they did not affect the weight sensing system used on the vehicle.

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward 8*	133	Suppressed
Rear	Middle	131	Suppressed
Facing	Rearward	132	Suppressed
Unbelted	Forward 7*	N/A	Suppressed
Rear	Middle	N/A	Suppressed
Facing	Rearward	N/A	Suppressed
Unbelted	Forward 4*	N/A	Suppressed
Forward	Middle	N/A	Suppressed
Facing	Rearward	N/A	Suppressed

<sup>\*</sup> The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft detent position with respect to the foremost position. (1 = Full Forward; 26 = Full Rearward; 26 total Seat Slide detents)

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Middle position. (SN 506)

Suppression Test Using 12-Month-Old CRABI Dummy (Part 572, Subpart R)
Section C Forward Facing Convertible CRS

NHTSA NO.:	C20155402	TEST DATE:	7/22/15
LABORATORY:	MGA	TECHNICIAN(S):	VG
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	062

CHILD RESTRAINT NAME:	Britax
CHILD RESTRAINT MODEL:	Roundabout E9L02
DATE OF MANUFACTURE:	7-2-2008

Base: \_\_On \_\_Off \_X\_N/A-Restraint does not have a removable base

Manufacturer's design seat back angle: 5.0° on Head Rest Pole 5.7° on Head Rest Pole

Manufacturer's specified anchorage position: Upper-most as 0
Tested anchorage position: Upper-most as 0

A blanket was not used in the suppression testing because it did not affect the weight sensing system used on the vehicle.

**Test Summary** 

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward 2*	127	Suppressed
Forward	Middle	133	Suppressed
Facing	Rearward	132	Suppressed
Unbelted	Forward 2*	N/A	Suppressed
Forward	Middle	N/A	Suppressed
Facing	Rearward	N/A	Suppressed
Belted	Forward 5*	130	Suppressed
Rear	Middle	131	Suppressed
Facing	Rearward	130	Suppressed
Unbelted	Forward 6*	N/A	Suppressed
Rear	Middle	N/A	Suppressed
Facing	Rearward	N/A	Suppressed

<sup>\*</sup> The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft detent position with respect to the foremost position. (1 = Full Forward; 26 = Full Rearward; 26 total Seat Slide detents)

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Middle position. (SN 506)

Suppression Test Using 12-Month-Old CRABI Dummy (Part 572, Subpart R)
Section C Forward Facing Convertible CRS

NHTSA NO.:	C20155402	TEST DATE:	7/22/15
LABORATORY:	MGA	TECHNICIAN(S):	VG
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	062

CHILD RESTRAINT NAME:	Cosco
CHILD RESTRAINT MODEL:	High Back Booster 22-209
DATE OF MANUFACTURE:	10-07-2008

Base: \_\_On \_\_Off \_X\_N/A-Restraint does not have a removable base

Manufacturer's design seat back angle: 5.0° on Head Rest Pole 5.7° on Head Rest Pole

Manufacturer's specified anchorage position: Upper-most as 0
Tested anchorage position: Upper-most as 0
Upper-most as 0

A blanket was not used in the suppression testing because it did not affect the weight sensing system used on the vehicle.

**Test Summary** 

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward	132	Suppressed
Forward	Middle	132	Suppressed
Facing	Rearward	130	Suppressed
Unbelted	Forward	N/A	Suppressed
Forward	Middle	N/A	Suppressed
Facing	Rearward	N/A	Suppressed
Unbelted	Forward	N/A	Suppressed
Rear	Middle	N/A	Suppressed
Facing	Rearward	N/A	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Rearward position. (SN 506)

The Cosco High Back Booster 22-209 does not have a rear facing belt path.

Suppression Test Using 12-Month-Old CRABI Dummy (Part 572, Subpart R)
Section C Forward Facing Convertible CRS

NHTSA NO.:	C20155402	TEST DATE:	7/22/15
LABORATORY:	MGA	TECHNICIAN(S):	VG
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	062

CHILD RESTRAINT NAME:	Evenflo	
CHILD RESTRAINT MODEL:	Generations 352	
DATE OF MANUFACTURE:	10-5-2006	

Base: \_\_On \_\_Off \_X\_N/A-Restraint does not have a removable base

Manufacturer's design seat back angle: 5.0° on Head Rest Pole 5.7° on Head Rest Pole

Manufacturer's specified anchorage position: Upper-most as 0
Tested anchorage position: Upper-most as 0
Upper-most as 0

A blanket was not used in the suppression testing because it did not affect the weight sensing system used on the vehicle.

**Test Summary** 

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward	128	Suppressed
Forward	Middle	132	Suppressed
Facing	Rearward	129	Suppressed
Unbelted	Forward	N/A	Suppressed
Forward	Middle	N/A	Suppressed
Facing	Rearward	N/A	Suppressed
Unbelted	Forward	N/A	Suppressed
Rear	Middle	N/A	Suppressed
Facing	Rearward	N/A	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Forward position. (SN 506)

The Evenflo Generations 352 does not have a rear facing belt path.

Suppression Test Using 12-Month-Old CRABI Dummy (Part 572, Subpart R)
Section C Forward Facing Convertible CRS

NHTSA NO.:	C20155402	TEST DATE:	7/22/15
LABORATORY:	MGA	TECHNICIAN(S):	VG
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	062

CHILD RESTRAINT NAME:	Graco
CHILD RESTRAINT MODEL:	ComfortSport
DATE OF MANUFACTURE:	6-15-2009

Base: \_\_On \_\_Off \_X\_N/A-Restraint does not have a removable base

Manufacturer's design seat back angle: 5.0° on Head Rest Pole 5.7° on Head Rest Pole

Manufacturer's specified anchorage position: Upper-most as 0
Tested anchorage position: Upper-most as 0
Upper-most as 0

A blanket was not used in the suppression testing because it did not affect the weight sensing system used on the vehicle.

**Test Summary** 

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward	131	Suppressed
Forward	Middle	130	Suppressed
Facing	Rearward	131	Suppressed
Unbelted	Forward	N/A	Suppressed
Forward	Middle	N/A	Suppressed
Facing	Rearward	N/A	Suppressed
Belted	Forward 8*	130	Suppressed
Rear	Middle	128	Suppressed
Facing	Rearward	130	Suppressed
Unbelted	Forward 8*	N/A	Suppressed
Rear	Middle	N/A	Suppressed
Facing	Rearward	N/A	Suppressed

<sup>\*</sup> The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft detent position with respect to the foremost position. (1 = Full Forward; 26 = Full Rearward; 26 total Seat Slide detents)

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Middle position. (SN 506)

### Suppression Test Using Newborn Infant Dummy (Part 572, Subpart K) Section A Car Bed

NHTSA NO.:	C20155402	TEST DATE:	7/22/15
LABORATORY:	MGA	TECHNICIAN(S):	VG
DUMMY TYPE:	Newborn Infant	DUMMY SERIAL NO.:	003

CAR BED NAME:	Angel Guard
CAR BED MODEL:	Angel Ride
DATE OF MANUFACTURE:	4-15-2008

Base: \_\_On \_\_Off  $\underline{X}$ \_N/A-Restraint does not have a removable base (A car bed with a removable base shall be treated as two separate models, i.e. this form and test procedure will be completed with the base on and then repeated on a new form with the base off.

Manufacturer's design seat back angle: 5.0° on Head Rest Pole 5.7° on Head Rest Pole

Manufacturer's specified anchorage position: Upper-most as 0
Tested anchorage position: Upper-most as 0
Upper-most as 0

A blanket and visor were not used in the suppression testing because they did not affect the weight sensing system used on the vehicle.

**Test Summary** 

Seat Belt	Seat Slide	Result
Daltad	Forward	Suppressed
Belted	Middle	Suppressed
	Rearward	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Forward position. (SN 506)

Suppression Test Using 3 Year Old Dummy And Booster Seats (Part 572, Subpart P)
Section D Forward Facing Belt Positioning Booster

NHTSA NO.:	C20155402	TEST DATE:	7/22/15
LABORATORY:	MGA	TECHNICIAN(S):	VG
DUMMY TYPE:	3 Year Old	DUMMY SERIAL NO.:	032

BOOSTER SEAT NAME:	Cosco	
BOOSTER SEAT MODEL:	Summit Deluxe High Back Booster 22-262	
DATE OF MANUFACTURE:	8-9-2007	

Manufacturer's design seat back angle: 5.0° on Head Rest Pole 5.7° on Head Rest Pole

Manufacturer's specified anchorage position: Upper-most as 0
Tested anchorage position: Upper-most as 0
Upper-most as 0

**Test Summary** 

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward 4*	10	Suppressed
Forward Facing	Middle	12	Suppressed
Without Harness	Rearward	12	Suppressed
Belted	Forward 4*	130	Suppressed
Forward Facing	Middle	132	Suppressed
Cinched With Harness	Rearward	130	Suppressed

<sup>\*</sup> The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft detent position with respect to the foremost position. (1 = Full Forward; 26 = Full Rearward; 26 total Seat Slide detents)

Successful Unbelted 5<sup>th</sup> percentile Female Dummy Reactivation was performed with the seat in the Rearward position. (SN506)

Suppression Test Using 3 Year Old Dummy and Booster Seats (Part 572, Subpart P)
Section D Forward Facing Toddler Belt Positioning Booster Seat

NHTSA NO.:	C20155402	TEST DATE:	7/22/15
LABORATORY:	MGA	TECHNICIAN(S):	VG
DUMMY TYPE:	3 Year Old	DUMMY SERIAL NO.:	032

BOOSTER SEAT NAME:	Graco
BOOSTER SEAT MODEL:	Platinum Cargo
DATE OF MANUFACTURE:	6-24-2008

Manufacturer's design seat back angle: 5.0° on Head Rest Pole 5.7° on Head Rest Pole

Manufacturer's specified anchorage position: Upper-most as 0
Tested anchorage position: Upper-most as 0

**Test Summary** 

Seat Belt Seat Slide		Cinch Load (N)	Result
Belted	Forward 6*	15	Suppressed
Forward Facing	Middle	15	Suppressed
Without Harness	Rearward	13	Suppressed
Belted	Forward 4*	127	Suppressed
Forward Facing	Middle	129	Suppressed
Cinched With Harness	Rearward	130	Suppressed

<sup>\*</sup> The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft detent position with respect to the foremost position. (1 = Full Forward; 26 = Full Rearward; 26 total Seat Slide detents)

Successful Unbelted 5<sup>th</sup> percentile Female Dummy Reactivation was performed with the seat in the Middle position. (SN506)

Suppression Test Using 3 Year Old Dummy and Convertible Restraints (Part 572, Subpart P)
Section C Forward Facing Convertible CRS

NHTSA NO.:	C20155402	TEST DATE:	7/22/15
LABORATORY:	MGA	TECHNICIAN(S):	VG
DUMMY TYPE:	3 Year Old	DUMMY SERIAL NO.:	032

CHILD RESTRAINT NAME:	Britax
CHILD RESTRAINT MODEL:	Roundabout E9L02
DATE OF MANUFACTURE:	7-2-2008

Manufacturer's design seat back angle: 5.0° on Head Rest Pole 5.7° on Head Rest Pole

Manufacturer's specified anchorage position: Upper-most as 0
Tested anchorage position: Upper-most as 0
Upper-most as 0

**Test Summary** 

Seat Belt	Seat Slide	Cinch Load (N)	Result
	Forward	129	Suppressed
Belted	Middle	129	Suppressed
	Rearward	128	Suppressed

Successful Unbelted 5<sup>th</sup> percentile Female Dummy Reactivation was performed with the seat in the Rearward position. (SN506)

Suppression Test Using 3 Year Old Dummy and Convertible Restraints (Part 572, Subpart P)
Section C Forward Facing Convertible CRS

NHTSA NO.:	C20155402	TEST DATE:	7/22/15
LABORATORY:	MGA	TECHNICIAN(S):	VG
DUMMY TYPE:	3 Year Old	DUMMY SERIAL NO.:	032

CHILD RESTRAINT NAME:	Cosco
CHILD RESTRAINT MODEL:	High Back Booster 22-209
DATE OF MANUFACTURE:	10-7-2008

Manufacturer's design seat back angle: 5.0° on Head Rest Pole 5.7° on Head Rest Pole

Manufacturer's specified anchorage position: Upper-most as 0
Tested anchorage position: Upper-most as 0
Upper-most as 0

**Test Summary** 

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward	10	Suppressed
(Without Harness)	Middle	12	Suppressed
(Without Hairless)	Rearward	9	Suppressed
Belted	Forward	130	Suppressed
(Cinched with	Middle	127	Suppressed
Harness)	Rearward	128	Suppressed

Successful Unbelted  $5^{\rm th}$  percentile Female Dummy Reactivation was performed with the seat in the Forward position. (SN506)

Suppression Test Using 3 Year Old Dummy and Convertible Restraints (Part 572, Subpart P)
Section C Forward Facing Convertible CRS

NHTSA NO.:	C20155402	TEST DATE:	7/22/15
LABORATORY:	MGA	TECHNICIAN(S):	VG
DUMMY TYPE:	3 Year Old	DUMMY SERIAL NO.:	032

CHILD RESTRAINT NAME:	Evenflo
CHILD RESTRAINT MODEL:	Generations 352
DATE OF MANUFACTURE:	10-5-2006

Manufacturer's design seat back angle: 5.0° on Head Rest Pole 5.7° on Head Rest Pole

Manufacturer's specified anchorage position: Upper-most as 0
Tested anchorage position: Upper-most as 0

**Test Summary** 

		<u> </u>	
Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward	14	Suppressed
(Without Harness)	Middle	18	Suppressed
(Without Flamess)	Rearward	17	Suppressed
Belted	Forward	129	Suppressed
(Cinched with	Middle	128	Suppressed
Harness)	Rearward	128	Suppressed

Successful Unbelted 5<sup>th</sup> percentile Female Dummy Reactivation was performed with the seat in the Middle position. (SN506)

Suppression Test Using 3 Year Old Dummy and Convertible Restraints (Part 572, Subpart P)
Section C Forward Facing Convertible CRS

NHTSA NO.:	C20155402	TEST DATE:	7/22/15
LABORATORY:	MGA	TECHNICIAN(S):	VG
DUMMY TYPE:	3 Year Old	DUMMY SERIAL NO.:	032

CHILD RESTRAINT NAME:	Graco
CHILD RESTRAINT MODEL:	ComfortSport
DATE OF MANUFACTURE:	6-15-2009

Manufacturer's design seat back angle: 5.0° on Head Rest Pole 5.7° on Head Rest Pole

Manufacturer's specified anchorage position: Upper-most as 0
Tested anchorage position: Upper-most as 0

**Test Summary** 

Seat Belt	Seat Slide	Cinch Load (N)	Result
	Forward 3*	131	Suppressed
Belted	Middle	127	Suppressed
	Rearward	132	Suppressed

<sup>\*</sup> The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft detent position with respect to the foremost position. (1 = Full Forward; 26 = Full Rearward; 26 total Seat Slide detents)

Successful Unbelted 5<sup>th</sup> percentile Female Dummy Reactivation was performed with the seat in the Rearward position. (SN506)

Suppression Test Using an Unbelted 3 Year Old Dummy (Part 572, Subpart P) No CRS

NHTSA NO.:	C20155402	TEST DATE:	7/22/15
LABORATORY:	MGA	TECHNICIAN(S):	VG
DUMMY TYPE:	3 Year Old	DUMMY SERIAL NO.:	032

**Test Summary** 

rest Summary				
Position	Seat Slide	Seat Back Angle **	Result	
Position 1	Forward	5.7° on HRP	Suppressed	
Sitting on seat with back against	Middle	5.7° on HRP	Suppressed	
seat back	Rearward	5.7° on HRP	Suppressed	
Position 2	Forward	29.6° on HRP	Suppressed	
Sitting on seat with back against	Middle	29.6° on HRP	Suppressed	
reclined seat back	Rearward	29.6° on HRP	Suppressed	
Position 3	Forward	5.7° on HRP	Suppressed	
Sitting on seat with back not against	Middle	5.7° on HRP	Suppressed	
seat back	Rearward	5.7° on HRP	Suppressed	
Position 4	Forward	5.7° on HRP	Suppressed	
Sitting on seat edge, spine vertical,	Middle	5.7° on HRP	Suppressed	
hands at dummy's sides	Rearward	5.7° on HRP	Suppressed	
Position 5	Forward	5.7° on HRP	Suppressed	
Standing on seat, facing forward	Middle	5.7° on HRP	Suppressed	
Standing on Seat, facing forward	Rearward	5.7° on HRP	Suppressed	
Docition 6	Forward	5.7° on HRP	Suppressed	
Position 6 Kneeling on seat, facing forward	Middle	5.7° on HRP	Suppressed	
Kneeling on Seat, facing forward	Rearward	5.7° on HRP	Suppressed	
Position 7	Forward	5.7° on HRP	Suppressed	
Kneeling on seat, facing rearward	Middle	5.7° on HRP	Suppressed	
Kileeling on Seat, facing realward	Rearward	5.7° on HRP	Suppressed	
Position 8	Forward	N/A	N/A	
Lying on seat. (Three designated	Middle	N/A	N/A	
seating positions only)	Rearward	N/A	N/A	

Successful Unbelted 5<sup>th</sup> percentile Female Dummy Reactivation was performed with the seat in the Forward position. (SN506)

<sup>\*\*</sup> The manufacturer's design seat back angle was 5.0° on the Head Rest Pole (HRP) which equaled 5.7° on the Head Rest Pole (HRP). When the seat was reclined 25° the seatback angle was 29.6° on the Head Rest Pole (HRP).

Suppression Test Using 6 Year Old Dummy And Booster Seats (Part 572, Subpart N)
Section D Forward Facing Toddler Belt Positioning Booster Seat

NHTSA NO.:	C20155402	TEST DATE:	7/22/15
LABORATORY:	MGA	TECHNICIAN(S):	VG
DUMMY TYPE:	6 Year Old	DUMMY SERIAL NO.:	155

CHILD RESTRAINT NAME:	Cosco	
CHILD RESTRAINT MODEL:	Summit Deluxe High Back Booster 22-262	
DATE OF MANUFACTURE:	8-9-2007	

Manufacturer's design seat back angle: 5.0° on Head Rest Pole 5.7° on Head Rest Pole

Manufacturer's specified anchorage position: Upper-most as 0
Tested anchorage position: Upper-most as 0

**Test Summary** 

Seat Belt	Seat Slide	Cinch Load (N)	Result
	Forward 5*	15	Suppressed
Belted	Middle	14	Suppressed
	Rearward	18	Suppressed

<sup>\*</sup> The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft detent position with respect to the foremost position. (1 = Full Forward; 26 = Full Rearward; 26 total Seat Slide detents)

Successful Unbelted 5<sup>th</sup> percentile Female Dummy Reactivation was performed with the seat in the Rearward position. (SN506)

Suppression Test Using 6 Year Old Dummy And Booster Seats (Part 572, Subpart N)
Section D Forward Facing Toddler Belt Positioning Booster Seat

NHTSA NO.:	C20155402	TEST DATE:	7/22/15
LABORATORY:	MGA	TECHNICIAN(S):	VG
DUMMY TYPE:	6 Year Old	DUMMY SERIAL NO.:	155

CHILD RESTRAINT NAME:	Graco
CHILD RESTRAINT MODEL:	Platinum Cargo
DATE OF MANUFACTURE:	6-24-2008

Manufacturer's design seat back angle: 5.0° on Head Rest Pole 5.7° on Head Rest Pole

Manufacturer's specified anchorage position: Upper-most as 0
Tested anchorage position: Upper-most as 0

**Test Summary** 

Seat Belt	Seat Slide	Cinch Load (N)	Result
	Forward 2*	15	Suppressed
Belted	Middle	14	Suppressed
	Rearward	18	Suppressed

<sup>\*</sup> The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft detent position with respect to the foremost position. (1 = Full Forward; 26 = Full Rearward; 26 total Seat Slide detents)

Successful Unbelted 5<sup>th</sup> percentile Female Dummy Reactivation was performed with the seat in the Middle position. (SN506)

Suppression Tests Using an Unbelted 6 Year Old Dummy (Part 572, Subpart N) (S24.2.1) No CRS

NHTSA NO.:	C20155402	TEST DATE:	7/22/15
LABORATORY:	MGA	TECHNICIAN(S):	VG
DUMMY TYPE:	6 Year Old	DUMMY SERIAL NO.:	155

**Test Summary** 

root outlinary						
Position	Seat Slide	Seat Back Angle **	Result			
Position 1	Forward 7*	5.7° on HRP	Suppressed			
Sitting on seat with back against	Middle	5.7° on HRP	Suppressed			
seat back	Rearward	5.7° on HRP	Suppressed			
Position 2	Forward 7*	29.6° on HRP	Suppressed			
Sitting on seat with back against	Middle	29.6° on HRP	Suppressed			
reclined seat back	Rearward	29.6° on HRP	Suppressed			
Position 3	Forward	5.7° on HRP	Suppressed			
Sitting on seat edge, spine vertical,	Middle	5.7° on HRP	Suppressed			
hands at dummy's sides	Rearward	5.7° on HRP	Suppressed			
Position 4	Forward 7*	5.7° on HRP	Suppressed			
Sitting on seat with back against	Middle	5.7° on HRP	Suppressed			
seat back then leaning on the door	Rearward	5.7° on HRP	Suppressed			

<sup>\*</sup> The ATD would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft detent position with respect to the foremost position. (1 = Full Forward; 26 = Full Rearward; 26 total Seat Slide detents)

Successful Unbelted 5<sup>th</sup> percentile Female Dummy Reactivation was performed with the seat in the Middle position. (SN506)

<sup>\*\*</sup> The manufacturer's design seat back angle was 5.0° on the Head Rest Pole (HRP) which equaled 5.7° on the Head Rest Pole (HRP). When the seat was reclined 25° the seatback angle was 29.6° on the Head Rest Pole (HRP).

Low Risk Deployment Tests Using an Unbelted 5<sup>th</sup> Percentile Female Dummy (Part 572, Subpart O) (S26) Position 1 - Chin On Module (S26.2)

NHTSA NO.:	C20155402	TEST DATE:	8/3/15
LABORATORY:	MGA	TECHNICIAN(S):	VG / JL
DUMMY TYPE:	5 <sup>th</sup> Percentile Female	DUMMY SERIAL NO.:	510

Manufacturer's design seat back angle: 5.0° on Head Rest Pole 5.0° on Head Rest Pole

Tested seat position: Full Aft

Tested steering wheel angle: 23.4°
Thorax cavity angle: 29.3°

Bottom of chin height: <u>0 mm - At Plane F Module Height</u>

**Air Bag Deployment Timing** 

	<u> </u>	
Stage No.	Firing time (ms)	Recorded firing time (ms)
1	0.0	0.0
2	100.0	100.0

5<sup>th</sup> Percentile Female SN 510 Position 1 (Chin On Module) 8/3/15

Injury Criteria	Max. Allowable Injury Assessment Values	Measured Value
HIC15	700	4
Peak Nij (Nte)	1.0	0.2
Time (ms)	NA	112.6
Peak Nij (Ntf)	1.0	0.2
Time (ms)	NA	35.5
Peak Nij (Nce)	1.0	0.1
Time (ms)	NA	213.9
Peak Nij (Ncf)	1.0	0.0
Time (ms)	NA	0.2
Neck Tension	2070 N	301
Neck Compression	2520 N	9
Chest g	60 g	7
Chest Displacement	52 mm	6
Left Femur	6805 N	29
Right Femur	6805 N	35

Calculated on data recorded for 125 ms after the initiation of the final stage of air bag deployment designed to deploy in any full frontal rigid barrier crash up to 26 km/h. (S4.11 (d)) Second stage fire time of 100 ms; Injuries calculated on 0 ms to 225 ms.

A new air bag and the original equipment parts were used for this deployment.

Low Risk Deployment Tests Using an Unbelted 5<sup>th</sup> Percentile Female Dummy (Part 572, Subpart O) (S26) Position 2 - Chin On Rim (S26.3)

NHTSA NO.:	C20155402	TEST DATE:	8/3/15
LABORATORY:	MGA	TECHNICIAN(S):	VG / JL
DUMMY TYPE:	5 <sup>th</sup> Percentile Female	DUMMY SERIAL NO.:	510

Manufacturer's design seat back angle: 5.0° on Head Rest Pole 5.0° on Head Rest Pole

Tested seat position: Full Aft

Tested steering wheel angle:  $\underline{21.6^{\circ}}^{*}$ Thorax cavity angle:  $\underline{28.0^{\circ}}$ 

Chin Point height: 6 mm – Below Steering Wheel Target
Note: The chin on rim steering wheel target is 10 mm below the highest point on the steering wheel

**Air Bag Deployment Timing** 

Stage No.	Firing time (ms)	Recorded firing time (ms)
1	0.0	0.0
2	100.0	100.0

5<sup>th</sup> Percentile Female SN 510 Position 2 (Chin On Rim) 8/3/15

Injury Criteria	Max. Allowable Injury Assessment Values	Measured Value
HIC15	700	26
Peak Nij (Nte)	1.0	0.3
Time (ms)	NA	15.2
Peak Nij (Ntf)	1.0	0.2
Time (ms)	NA	36.5
Peak Nij (Nce)	1.0	0.1
Time (ms)	NA	181.6
Peak Nij (Ncf)	1.0	0.1
Time (ms)	NA	87.9
Neck Tension	2070 N	555
Neck Compression	2520 N	120
Chest g	60 g	21
Chest Displacement	52 mm	21
Left Femur	6805 N	37
Right Femur	6805 N	41

Calculated on data recorded for 125 ms after the initiation of the final stage of air bag deployment designed to deploy in any full frontal rigid barrier crash up to 26 km/h. (S4.11 (d)) Second stage fire time of 100 ms; Injuries calculated on 0 ms to 225 ms.

A new air bag and the original equipment parts were used for this deployment.

<sup>\*</sup>The dummy contacted the windshield with the steering wheel at mid position. The steering controls were adjusted to lower the upper steering wheel rim the necessary amount to bring the Chin Point coincident with the upper steering wheel rim. The rear thorax cavity was adjusted along with the steering wheel angle.

#### **DATA SHEET 32**

## VEHICLE WEIGHT, FUEL TANK, AND ATTITUDE DATA

Test Vehicle: 2015 Mazda 3 NHTSA No.: C20155402
Test Program: FMVSS 208 Compliance Test Date: 8/31/15

Test Technician: Ben Storey

IMPACT ANGLE:	0°							
BELTED DUMMIES (YES/NO):	NO							
TEST SPEED:	X	32 to 40 km	ph		0 to 48	kmph		0 to 56 kmph
DRIVER DUMMY:	X		5 <sup>th</sup> female				50 <sup>th</sup> male	
PASSENGER DUMMY:		X		5 <sup>th</sup> female				50 <sup>th</sup> male

X 1. Fill the transmission with transmission fluid to the satisfactory range.

X 2. Drain fuel from vehicle.

3. Run the engine until fuel remaining in the fuel delivery system is used and the engine stops.

Record the useable fuel tank capacity supplied by the COTR.
 Useable Fuel Tank Capacity supplied by COTR: 50.0 liters (13.2 gallons)

Record the fuel tank capacity supplied in the owner's manual.
 Useable Fuel Tank Capacity in owner's manual: 50.0 liters (13.2 gallons)

6. Using purple dyed Stoddard solvent having the physical and chemical properties of Type 1 solvent or cleaning fluid, Table 1, ASTM Standard D484-71, "Standard Specifications for Hydrocarbon Dry-cleaning Solvents," or gasoline, fill the fuel tank. Amount Added: 50.0 liters (13.2 gallons)

7. Fill the coolant system to capacity.

8. Fill the engine with motor oil to the Max. mark on the dip stick.

9. Fill the brake reservoir with brake fluid to its normal level.

10. Fill the windshield washer reservoir to capacity.

11. Inflate the tires to the tire pressure on the tire placard. If no tire placard is available, inflate the tires to the recommended pressure in the owner's manual.

Tire placard pressure:	RF:	36 psi	LF:	36 psi	RR:	36 psi	LR:	36 psi
Owner's manual pressure:	RF:	36 psi	LF:	36 psi	RR:	36 psi	LR:	36 psi
Actual inflated pressure:	RF:	36 psi	LF:	36 psi	RR:	36 psi	LR:	36 psi

X 12. Record the vehicle weight at each wheel to determine the unloaded vehicle weight (UVW), i.e. "as delivered" weight).

Right Front (kg):	395.5	247.7	
Left Front (kg):	404.2	Left Rear (kg):	264.9
Total Front (kg):	799.7	Total Rear (kg):	512.6
% Total Weight:	39.1		
UVW = TOTAL FR	1312.3		

13. UVW Test Vehicle Attitude: (All dimensions in millimeters)

13.1 Mark a point on the vehicle above the center of each wheel.

13.2 Place the vehicle on a level surface.

13.3 Measure perpendicular to the level surface to the 4 points marked on the body and record the measurements.

RF: 697 LF: 689 RR: 716 LR: 718

14.2 VCW = Gross Vehicle Weight - UVW  VCW = =  X 14.3 VCW = 385 kg (850 lbs)  X 14.4 Does the certification or tire placard contain the Designated Seating Capacity (DSC)?  X Yes, go to 14.6 No, go to 14.5 and skip 14.6  14.5 DSC = Total number of seat belt assemblies =  14.6 DSC = 5  X 14.7 RCLW = VCW - (68 kg x DSC) = 385 kg - (68 kg x 5) = 45 kg  X 14.8 Is the vehicle certified as a truck, MPV or bus (see the certification label on the door jamb)?  Yes, if the calculated RCLW is greater than 136 kg, use 136 kg as the RCLW. (S8.1.1)  X No, use the RCLW calculated in 14.7  X 15. Fully Loaded Weight (100% fuel fill): 1455.7 kg  Yes the appropriate test dummy in both front outboard seating positions.  Driver: X 5 <sup>th</sup> female 50 <sup>th</sup> male Passenger: X 5 <sup>th</sup> female 50 <sup>th</sup> male  Load the vehicle with the RCLW from 14.7 or 14.8 whichever is applicable.  X 15.3 Place the RCLW in the cargo area. Center the load over the longitudinal centerline of the vehicle. (S8.1.1 (d))	VCW = =	X X	14. 14.1	Calculate the Rated Cargo and Luggage Weight (RCLW): 45 kg Does the vehicle have the vehicle capacity weight (VCW) on the certification label or tire placard?  Yes, go to 14.3 No, go to 14.2						
<ul> <li>X 14.3 VCW = 385 kg (850 lbs)</li> <li>14.4 Does the certification or tire placard contain the Designated Seating Capacity (DSC)?</li> <li>X Yes, go to 14.6 No, go to 14.5 and skip 14.6</li> <li>DSC = Total number of seat belt assemblies =</li> <li>14.6 DSC = 5</li> <li>X 14.7 RCLW = VCW - (68 kg x DSC) = 385 kg - (68 kg x 5) = 45 kg</li> <li>Is the vehicle certified as a truck, MPV or bus (see the certification label on the door jamb)?</li> <li>Yes, if the calculated RCLW is greater than 136 kg, use 136 kg as the RCLW. (S8.1.1)</li> <li>X No, use the RCLW calculated in 14.7</li> <li>15. Fully Loaded Weight (100% fuel fill): 1455.7 kg</li> <li>15.1 Place the appropriate test dummy in both front outboard seating positions.</li> <li>Driver: X 5<sup>th</sup> female 50<sup>th</sup> male</li> <li>Passenger: X 5<sup>th</sup> female 50<sup>th</sup> male</li> <li>Load the vehicle with the RCLW from 14.7 or 14.8 whichever is applicable.</li> <li>X 15.2 Load the Vehicle with the RCLW from 14.7 or 14.8 whichever is applicable.</li> <li>Place the RCLW in the cargo area. Center the load over the longitudinal centerline of the vehicle. (S8.1.1 (d))</li> </ul>	X 14.3 VCW = 385 kg (850 lbs)  14.4 Does the certification or tire placard contain the Designated Seating Capacity (DSC)?  X Yes, go to 14.6 No, go to 14.5 and skip 14.6  DSC = Total number of seat belt assemblies =  X 14.6 DSC = _5  X 14.7 RCLW = VCW - (68 kg x DSC) = 385 kg - (68 kg x 5) = 45 kg  X 14.8 Is the vehicle certified as a truck, MPV or bus (see the certification label on the door jamb)?  Yes, if the calculated RCLW is greater than 136 kg, use 136 kg as the RCLW. (S8.1.1)  X No, use the RCLW calculated in 14.7  X 15. Fully Loaded Weight (100% fuel fill): 1455.7 kg  X 15.1 Place the appropriate test dummy in both front outboard seating positions.  Driver: X 5th female 50th male Passenger: X 5th female 50th male  X 15.2 Load the vehicle with the RCLW from 14.7 or 14.8 whichever is applicable. Place the RCLW in the cargo area. Center the load over the longitudinal centerline of the vehicle. (S8.1.1 (d))  X 15.4 Record the vehicle weight at each wheel to determine the Fully Loaded Weight.  Right Front (kg): 417.8 Right Rear (kg): 294.4  Left Front (kg): 427.3 Left Rear (kg): 316.2  Total Front (kg): 845.1 Total Rear (kg): 610.6		14.2	VCW = Gross Vehic	le Weight - UVW					
<ul> <li>X 14.4 Does the certification or tire placard contain the Designated Seating Capacity (DSC)?</li> <li>X Yes, go to 14.6 No, go to 14.5 and skip 14.6</li> <li>14.5 DSC = Total number of seat belt assemblies =</li></ul>	X 14.4 Does the certification or tire placard contain the Designated Seating Capacity (DSC)?  X Yes, go to 14.6 No, go to 14.5 and skip 14.6  DSC = Total number of seat belt assemblies =			VCW	=	=				
14.5 DSC = Total number of seat belt assemblies =	14.5 DSC = Total number of seat belt assemblies =	X		Does the certification  X Yes, go to 14.6	n or tire placard cont	tain the Designated Sea	ating Capacity (DS	SC)?		
<ul> <li>X 14.6 DSC = 5/L RCLW = VCW - (68 kg x DSC) = 385 kg - (68 kg x 5) = 45 kg</li> <li>X 14.8 Is the vehicle certified as a truck, MPV or bus (see the certification label on the door jamb)?</li></ul>	14.6 DSC = 5 14.7 RCLW = VCW - (68 kg x DSC) = 385 kg - (68 kg x 5) = 45 kg  14.8 Is the vehicle certified as a truck, MPV or bus (see the certification label on the door jamb)?  Yes, if the calculated RCLW is greater than 136 kg, use 136 kg as the RCLW. (S8.1.1)  X No, use the RCLW calculated in 14.7  15. Fully Loaded Weight (100% fuel fill): 1455.7 kg  15.1 Place the appropriate test dummy in both front outboard seating positions.  Driver: X 5 <sup>th</sup> female 50 <sup>th</sup> male  Passenger: X 5 <sup>th</sup> female 50 <sup>th</sup> male  15.2 Load the vehicle with the RCLW from 14.7 or 14.8 whichever is applicable.  Y 15.1 Place the RCLW in the cargo area. Center the load over the longitudinal centerline of the vehicle. (S8.1.1 (d))  X 15.4 Record the vehicle weight at each wheel to determine the Fully Loaded Weight.  Right Front (kg): 417.8 Right Rear (kg): 294.4  Left Front (kg): 427.3 Left Rear (kg): 316.2  Total Front (kg): 845.1 Total Rear (kg): 610.6		14.5			olies =				
<ul> <li>X</li></ul>	14.7 RCLW = VCW - (68 kg x DSC) = 385 kg - (68 kg x 5) = 45 kg  14.8 Is the vehicle certified as a truck, MPV or bus (see the certification label on the door jamb)?  Yes, if the calculated RCLW is greater than 136 kg, use 136 kg as the RCLW. (S8.1.1)  X No, use the RCLW calculated in 14.7  15. Fully Loaded Weight (100% fuel fill): 1455.7 kg  15.1 Place the appropriate test dummy in both front outboard seating positions.  Driver: X 5 <sup>th</sup> female 50 <sup>th</sup> male  Passenger: X 5 <sup>th</sup> female 50 <sup>th</sup> male  15.2 Load the vehicle with the RCLW from 14.7 or 14.8 whichever is applicable.  Place the RCLW in the cargo area. Center the load over the longitudinal centerline of the vehicle. (S8.1.1 (d))  X 15.4 Record the vehicle weight at each wheel to determine the Fully Loaded Weight.  Right Front (kg): 417.8 Right Rear (kg): 294.4  Left Front (kg): 427.3 Left Rear (kg): 316.2  Total Front (kg): 845.1 Total Rear (kg): 610.6	X								
jamb)?  Yes, if the calculated RCLW is greater than 136 kg, use 136 kg as the RCLW. (S8.1.1)  X No, use the RCLW calculated in 14.7  Fully Loaded Weight (100% fuel fill): 1455.7 kg  15.1 Place the appropriate test dummy in both front outboard seating positions.  Driver:  X 5 <sup>th</sup> female  Passenger:  X 5 <sup>th</sup> female  50 <sup>th</sup> male  Passenger:  X 5 <sup>th</sup> female  50 <sup>th</sup> male  Load the vehicle with the RCLW from 14.7 or 14.8 whichever is applicable.  Place the RCLW in the cargo area. Center the load over the longitudinal centerline of the vehicle. (S8.1.1 (d))	jamb)?  Yes, if the calculated RCLW is greater than 136 kg, use 136 kg as the RCLW. (S8.1.1)  X No, use the RCLW calculated in 14.7  Fully Loaded Weight (100% fuel fill): 1455.7 kg  Place the appropriate test dummy in both front outboard seating positions.  Driver: X 5 <sup>th</sup> female 50 <sup>th</sup> male  Passenger: X 5 <sup>th</sup> female 50 <sup>th</sup> male  Load the vehicle with the RCLW from 14.7 or 14.8 whichever is applicable.  Place the RCLW in the cargo area. Center the load over the longitudinal centerline of the vehicle. (S8.1.1 (d))  X 15.4 Record the vehicle weight at each wheel to determine the Fully Loaded Weight.  Right Front (kg): 417.8 Right Rear (kg): 294.4  Left Front (kg): 427.3 Left Rear (kg): 316.2  Total Front (kg): 845.1 Total Rear (kg): 610.6	X	14.7	RCLW = VCW - (68)	$kg \times DSC$ ) = $385 kg$	-(68  kg x  5) = 45  kg				
Yes, if the calculated RCLW is greater than 136 kg, use 136 kg as the RCLW. (S8.1.1)  X No, use the RCLW calculated in 14.7  Fully Loaded Weight (100% fuel fill): 1455.7 kg  Place the appropriate test dummy in both front outboard seating positions.  Driver:  X 5 <sup>th</sup> female  Passenger:  X 5 <sup>th</sup> female  50 <sup>th</sup> male  Passenger:  X 5 <sup>th</sup> female  50 <sup>th</sup> male  Passenger:  X 5 <sup>th</sup> female  Flace the RCLW from 14.7 or 14.8 whichever is applicable.  Place the RCLW in the cargo area. Center the load over the longitudinal centerline of the vehicle. (S8.1.1 (d))	Yes, if the calculated RCLW is greater than 136 kg, use 136 kg as the RCLW. (S8.1.1)  X No, use the RCLW calculated in 14.7  15. Fully Loaded Weight (100% fuel fill): 1455.7 kg Place the appropriate test dummy in both front outboard seating positions.  Driver: X 5 <sup>th</sup> female 50 <sup>th</sup> male Passenger: X 5 <sup>th</sup> female 50 <sup>th</sup> male  Yes, if the calculated RCLW front outboard seating positions.  Driver: X 5 <sup>th</sup> female 50 <sup>th</sup> male  Load the vehicle with the RCLW from 14.7 or 14.8 whichever is applicable.  Place the RCLW in the cargo area. Center the load over the longitudinal centerline of the vehicle. (S8.1.1 (d))  Record the vehicle weight at each wheel to determine the Fully Loaded Weight.  Right Front (kg): 417.8 Right Rear (kg): 294.4  Left Front (kg): 427.3 Left Rear (kg): 316.2  Total Front (kg): 845.1 Total Rear (kg): 610.6	X	14.8	Is the vehicle certifie	ed as a truck, MPV o	r bus (see the certificat	ion label on the do	oor		
Driver: X 5 <sup>th</sup> female 50 <sup>th</sup> male  Passenger: X 5 <sup>th</sup> female 50 <sup>th</sup> male  X 15.2 Load the vehicle with the RCLW from 14.7 or 14.8 whichever is applicable.  Place the RCLW in the cargo area. Center the load over the longitudinal centerline of the vehicle. (S8.1.1 (d))	Driver: X 5 <sup>th</sup> female 50 <sup>th</sup> male  X 15.2 Load the vehicle with the RCLW from 14.7 or 14.8 whichever is applicable.  Y 15.3 Place the RCLW in the cargo area. Center the load over the longitudinal centerline of the vehicle. (S8.1.1 (d))  X 15.4 Record the vehicle weight at each wheel to determine the Fully Loaded Weight.    Right Front (kg): 417.8 Right Rear (kg): 294.4     Left Front (kg): 427.3 Left Rear (kg): 316.2     Total Front (kg): 845.1 Total Rear (kg): 610.6	X		Yes, if the calcular (S8.1.1)  X No, use the RCL Fully Loaded Weight	W calculated in 14.7 t (100% fuel fill): 145	, 55.7 kg	·			
X 15.2 Load the vehicle with the RCLW from 14.7 or 14.8 whichever is applicable. 15.3 Place the RCLW in the cargo area. Center the load over the longitudinal centerline of the vehicle. (S8.1.1 (d))	X 15.2 Load the vehicle with the RCLW from 14.7 or 14.8 whichever is applicable. 15.3 Place the RCLW in the cargo area. Center the load over the longitudinal centerline of the vehicle. (S8.1.1 (d))  X 15.4 Record the vehicle weight at each wheel to determine the Fully Loaded Weight.  Right Front (kg): 417.8 Right Rear (kg): 294.4  Left Front (kg): 427.3 Left Rear (kg): 316.2  Total Front (kg): 845.1 Total Rear (kg): 610.6		13.1	riace the appropriat	e test duffilly in both	ii iioiii oulboaid sealiii(	g positions.			
X 15.3 Place the RCLW in the cargo area. Center the load over the longitudinal centerline of the vehicle. (S8.1.1 (d))	X 15.3 Place the RCLW in the cargo area. Center the load over the longitudinal centerline of the vehicle. (S8.1.1 (d))  X 15.4 Record the vehicle weight at each wheel to determine the Fully Loaded Weight.  Right Front (kg): 417.8 Right Rear (kg): 294.4  Left Front (kg): 427.3 Left Rear (kg): 316.2  Total Front (kg): 845.1 Total Rear (kg): 610.6			Driver: $\underline{X} 5^{th}$ Passenger: $\underline{X} 5^{th}$	female 50 <sup>th</sup> ma female 50 <sup>th</sup> ma	le le				
X 15.3 Place the RCLW in the cargo area. Center the load over the longitudinal centerline of the vehicle. (S8.1.1 (d))	X 15.3 Place the RCLW in the cargo area. Center the load over the longitudinal centerline of the vehicle. (S8.1.1 (d))  X 15.4 Record the vehicle weight at each wheel to determine the Fully Loaded Weight.  Right Front (kg): 417.8 Right Rear (kg): 294.4  Left Front (kg): 427.3 Left Rear (kg): 316.2  Total Front (kg): 845.1 Total Rear (kg): 610.6	X	15.2	Load the vehicle witl	h the RCLW from 14	.7 or 14.8 whichever is	applicable.			
	X 15.4 Record the vehicle weight at each wheel to determine the Fully Loaded Weight.  Right Front (kg): 417.8 Right Rear (kg): 294.4  Left Front (kg): 427.3 Left Rear (kg): 316.2  Total Front (kg): 845.1 Total Rear (kg): 610.6	X		Place the RCLW in t	he cargo area. Cen			ne of		
X 15.4 Record the vehicle weight at each wheel to determine the Fully Loaded Weight.	Left Front (kg):       427.3       Left Rear (kg):       316.2         Total Front (kg):       845.1       Total Rear (kg):       610.6	X	15.4	-		to determine the Fully	Loaded Weight.			
Dials Front (lar)	Left Front (kg):       427.3       Left Rear (kg):       316.2         Total Front (kg):       845.1       Total Rear (kg):       610.6			District (4.)	447.0	Diale ( D // - )	004.4	1		
	Total Front (kg): 845.1 Total Rear (kg): 610.6									
	1 % LOISH WEIGHT: "78   % LOISH WEIGHT: // U					` •				
	% GVW 53.7 % GVW 46.7					% Total Weight:				

Right Front (kg):	417.8	417.8 Right Rear (kg):					
Left Front (kg):	427.3	Left Rear (kg):	316.2				
Total Front (kg):	845.1	845.1 Total Rear (kg):					
% Total Weight:	58.1	% Total Weight:	41.9				
% GVW	% GVW 53.7 % GVW						
(% GVW = Axle GVW divided by Vehicle GVW)							
Fully Loaded Weight = Total Front Plus Total Rear (kg): 1455.7							

Χ	16.	Fully Loaded Test Venicle Attitude: (All dimensions in millimeters)
X	16.1	Place the vehicle on a level surface

Place the vehicle on a level surface. 16.1

16.2 Measure perpendicular to the level surface to the 4 points marked on the body (see 13.1 above) and record the measurements.

RF: 688 LF:	680	RR:	695	LR:	688
-------------	-----	-----	-----	-----	-----

17. Drain the fuel system. Χ 18. Using purple dyed Stoddard solvent having the physical and chemical properties of Type 1 solvent or cleaning fluid, Table 1, ASTM Standard D484-71, "Standard Specifications for Hydrocarbon Dry-cleaning Solvents," fill the fuel tank to 92 - 94 percent of useable capacity. Fuel tank capacity x .94 = 50.0 liters (13.2 gallons) x .94 = 47.0 liters (12.4 gallons) Amount added: 46.4 liters (12.27 gallons) 93.0% 19. Crank the engine to fill the fuel delivery system with Stoddard solvent. 20. Calculate the test weight range. 20.1 Calculated Weight = UVW (see 12 above) + RCLW (see 14 above) + 2x(dummy weight) 1455.3 kg = 1312.3 kg + 45.0 kg + 98.0 kgΧ 20.2 Test Weight Range = Calculated Weight (- 4.5 kg, - 9 kg.) Max. Test Weight = Calculated Test Weight - 4.5 kg = 1450.8 kg Min. Test Weight = Calculated Test Weight - 9 kg = 21. Remove the RCLW from the cargo area. 22. Drain transmission fluid, engine coolant, motor oil, and windshield washer fluid from the test vehicle so that Stoddard solvent leakage from the fuel system will be evident. Vehicle Components Removed For Weight Reduction: 23. Right Tail Light, Trunk Lining and Trim, Spare Tire, Jack and Tools, Rear Sill Trim Secure the equipment and ballast in the load carrying area and distribute it, as nearly 24. as possible, to obtain the proportion of axle weight indicated by the gross axle weight ratings and center it over the longitudinal centerline of the vehicle. 25. If necessary, add ballast to achieve the actual test weight. N/A X Weight of Ballast: 14.1 kg Χ Ballast, including test equipment, must be contained so that it will not shift during the 26. impact event or interfere with data collection or interfere with high-speed film recordings or affect the structural integrity of the vehicle or do anything else to affect

test results. Care must be taken to assure that any attachment hardware added to the vehicle is not in the vicinity of the fuel tank or lines.

Χ 27. Record the vehicle weight at each wheel to determine the actual test weight.

Right Front (kg):	425.9	283.5					
Left Front (kg):	oft Front (kg): 418.7 Left Rear (kg):						
Total Front (kg):	Total Rear (kg):	604.2					
% Total Weight:	58.3	% Total Weight:	41.7				
% GVW	53.7	46.7					
(% GVW = Axle GVW divided by Vehicle GVW)							
TOTAL FRONT PLUS TOTAL REAR (kg): 1448.8							

Χ 28. Is the test weight between the Max. Weight and the Min. Weight (See 20.2)?

X Yes No, explain why not.

Test Weight Vehicle Attitude: (all dimensions in millimeters) 29.

Place the vehicle on a level surface. 29.1

29.2 Measure perpendicular to the level surface to the 4 points marked on the body (see 13 above) and record the measurements.

> RF: 689 LF: 688 RR: 705 LR: 692

X 30. X 30.1	Summary of test attitude AS DELIVERED:
	RF: 697 LF: 689 RR: 716 LR: 718
	AS TESTED:
	RF: 689 LF: 688 RR: 705 LR: 692
	FULLY LOADED:
	RF: 688 LF: 680 RR: 695 LR: 688
X 30.2	Is the "as tested" test attitude equal to or between the "fully loaded" and "as delivered" attitude?  X No, explain why not.
REMARKS:	
Signature: _	Ben <i>Stores</i> Date: <u>8/31/15</u>
I certify that	I have read and performed each instruction.

#### **DATA SHEET 33**

## **VEHICLE ACCELEROMETER LOCATION AND MEASUREMENT**

Test Vehicle: 2015 Mazda 3 NHTSA No.: C20155402
Test Program: FMVSS 208 Compliance Test Date: 8/31/15

Test Technician: Ben Storey

IMPACT ANGLE:	0°								
BELTED DUMMIES (YES/NO):	NO								
TEST SPEED:	X 32 to 40 kmpl		ph		0 to 48 kmph			0	to 56 kmph
DRIVER DUMMY:	X		5 <sup>th</sup> female					50 <sup>th</sup> male	
PASSENGER DUMMY:	X		5 <sup>th</sup> female					50 <sup>th</sup> male	

- The state of the location where the vertical plane parallel to the longitudinal centerline of the vehicle and through the center of the left front outboard seating position intersects the left rear seat cross member. Install an accelerometer at this intersection on the rear seat cross member to record x-direction accelerations. Record the location on the following chart.
- X 2. Find the location where the vertical plane parallel to the longitudinal centerline of the vehicle and through the center of the right front outboard seating position intersects the right rear seat cross member. Install an accelerometer at this intersection on the rear seat cross member to record x-direction accelerations. Record the location on the following chart.
- X 3. Find the location where a vertical plane through the longitudinal centerline of the vehicle and a vertical transverse plane through the center of the two wheels on opposite sides of the engine intersect at the top of the engine. Install an accelerometer at this intersection to record x-direction accelerations. Record the location on the following chart.
- 4. Find the location where a vertical plane through the longitudinal centerline of the vehicle and a vertical transverse plane through the center of the two wheels on opposite sides of the engine intersect the bottom of the engine. Install an accelerometer at this intersection to record x-direction accelerations. Record the location on the following chart.
- Install an accelerometer on the right front brake caliper to record x-direction accelerations. Record the location on the following chart.
- X 6. Find the location where a vertical plane through the longitudinal centerline of the vehicle intersects the top of the instrument panel. Install an accelerometer at this intersection to record x-direction accelerations. Record the location on the following chart.
- 7. Install an accelerometer on the left front brake caliper to record x-direction accelerations. Record the location on the following chart.
- X 8. Find the location where a vertical plane through the longitudinal centerline of the vehicle intersects the floor of the trunk. Install an accelerometer on the trunk floor at this intersection to record z-direction accelerations. Record the location on the following chart.

## **REMARKS:**

I certify that I	have read	and p	erformed	each i	nstruction.
		_			

Signature: \_\_\_\_\_ Date: <u>8/31/15</u>

## **VEHICLE ACCELEROMETER LOCATION AND DATA SUMMARY** CENTERLINE OF FRONT WHEELS 5 2 В 6 8 CENTERLINE X **ENGINE** TOP VIEW **ACCELEROMETER REAR SEAT CUSHION** COORDINATE SYSTEM ASSY. FRONT ATTACHMENT (POSITIVE DIRECTION SHOWN) **BRACKET SUPPORT** С **ENGINE 1** 3 8 Н G **BOTTOM OF** OIL PAN Ε DISC BRAKE **CALIPER LEFT SIDE VIEW**

Dimensions Corresponding To The Letters "A" Through "K" (Excluding "I") Are Recorded In The Table On The Following Page.

Accelerometers Corresponding To The Numbers 1 Through 8 Are Specified On The Preceding Page.

## **VEHICLE ACCELEROMETER LOCATION AND MEASUREMENTS**

DIMENSION		<u>L</u>	ENGT	H (mm)				
	PRETE	PRETEST VALUES						
A (LH Rear Seat Xmbr)			39	92				
B (RH Rear Seat Xmbr)			39	98				
<u>C</u> (Engine Top)			36	93				
D (Engine Bottom)			38	48				
E (Caliper)	Right Side:	3758		Left Side:	3757			
F (Left Caliper)			69	92				
<u>G</u> (IP)			30	10				
H (Seat)			17	80				
J (Right Caliper)			69	)2				
K (Trunk)			11	00				
	<u>POST T</u>	EST VALU	<u>JES</u>					
A (LH Rear Seat Xmbr)			39	92				
B (RH Rear Seat Xmbr)			39	98				
<u>C</u> (Engine Top)			35	72				
D (Engine Bottom)			38	30				
E (Caliper)	Right Side:	3751		Left Side:	3761			
F (Left Caliper)	696							
<u>G</u> (IP)	3010							
H (Seat)	1780							
J (Right Caliper)			69	96				
K (Trunk)			11	00				

## **DATA SHEET 34**

## **PHOTOGRAPHIC TARGETS**

Test Vehicle: 2015 Mazda 3 NHTSA No.: C20155402
Test Program: FMVSS 208 Compliance Test Date: 8/31/15

Test Technician: Ben Storey

IMPACT ANGLE:	0°								
BELTED DUMMIES (YES/NO):	NO								
TEST SPEED:	X 32 to 40 kmp		ph	h 0 to 48 kmph				0	to 56 kmph
DRIVER DUMMY:	X		5 <sup>th</sup> female					50 <sup>th</sup> male	
PASSENGER DUMMY:	X		5 <sup>th</sup> female					50 <sup>th</sup> male	

		71 0 15111611
X	1.	FMVSS 208 vehicle targeting requirements (See Figures 28A and 28B)
X	1.1	Targets A1 and A2 are on flat rectangular panels.
X	1.2	Three circular targets at least 90 mm in diameter and with black and yellow
		quadrants are mounted at the front on the outboard sides of A1 and A2. The
		center of each circular target is 100 mm from the one next to it.
X		Distance between targets (mm): 100 mm
X	1.3	Three circular targets at least 90 mm in diameter and with black and yellow
	1.0	quadrants are mounted at the back on the outboard sides of on A1 and A2. The
		center of each circular target is 100 mm from the one next to it.
Y		Distance between targets (mm): 100 mm
X	1.4	The distance between the first circular target at the front of A1 and A2 and the last
^	1.4	circular target at the back of A1 and A2 is at least 915 mm.
V		· · · · · · · · · · · · · · · · · · ·
X	4 -	Distance between the first and last circular targets (mm): 915 mm
X	1.5	Firmly fix target A1 on the vehicle roof in the vertical longitudinal plane that is
	4.0	coincident with the midsagittal plane of the driver dummy.
X	1.6	Firmly fix target A2 on the vehicle roof in the vertical longitudinal plane that is
		coincident with the midsagittal plane of the passenger dummy.
X	1.7	Two circular targets (C1 and C2) at least 90 mm in diameter and with black and
		yellow quadrants are mounted on the outside of the driver door. The centers of
		each circular target are at least 610 mm apart.
X		Distance between targets (mm): 610 mm
X	1.8	Two circular targets (C1 and C2) at least 90 mm in diameter and with black and
		yellow quadrants are mounted on the outside of the passenger door. The centers
		of each circular target are at least 610 mm apart.
X		Distance between targets (mm): 610 mm
X	1.9	Place tape with squares having alternating colors on the top portion of the
		steering wheel.
X	1.10	Chalk the bottom portion of the steering wheel.
X	1.11	<u>Is</u> this an offset test?
		Yes, continue with this section
		X No, go to 2.
	1.12	Measure the width of the vehicle.
		Vehicle width (mm):
	1.13	Find the centerline of the vehicle. (1/2 of the vehicle width)
	1.14	Find the line parallel to the centerline of the vehicle and 0.1 x vehicle width from
		the centerline of the vehicle.
	1.15	Apply 25 mm wide tape with alternating black and yellow squares parallel to and
		and the line found in AAA. The adventure of such that I have been a

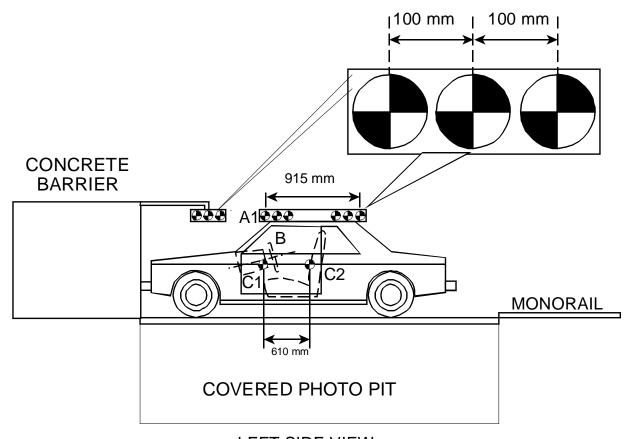
to the front edge of the windshield. (Figure 28D)

on each side of the line found in 1.14. The edge of each tape shall be 50 mm from the line found in 1.14. The tape shall extend from the bottom of the bumper

X	2.	Barrier Targeting
X	2.1	Fix two stationary targets D1 and D2 to the barrier as shown in the Figure 28A.
		One target is in the vertical longitudinal plane that is coincident with the
		midsagittal plane of the driver dummy. The other is in the vertical longitudinal
		plane that is coincident with the midsagittal plane of the passenger dummy.
X	2.2	Targets D1 and D2 are on a rectangular panel.
X	2.3	Three circular targets at least 90 mm in diameter and with black and yellow
		quadrants are mounted on the sides of the rectangular panel away from the
		longitudinal centerline of the vehicle. The center of each circular target is 100 mm from the one next to it.
Y		Distance between circular targets on D1 (mm): 100 mm
X		Distance between circular targets on D1 (mm): 100 mm
×	3.	FMVSS 208 Dummy Targeting Requirements
X X X	3.1	Place a circular target with black and yellow quadrants on both sides of the driver
	J. I	dummy head as close as possible to the center of gravity of the head in the x and
		z direction (relative to the measuring directions of the accelerometers).
X	3.2	Place a circular target with black and yellow quadrants on both sides of the
		passenger dummy head as close as possible to the center of gravity of the head
		in the x and z direction (relative to the measuring directions of the
		accelerometers).
X	3.3	Place a circular target with black and yellow quadrants on the outboard shoulder
		of the driver dummy. Place the target as high up on the arm as possible at the
		intersection of the arm and shoulder. The sleeve of the shirt on the dummy may
	0.4	be cut to make the target visible, but do not remove any material.
X	3.4	Place a circular target with black and yellow quadrants on the outboard shoulder
		of the passenger dummy. Place the target as high up on the arm as possible at
		the intersection of the arm and shoulder. The sleeve of the shirt on the dummy may be cut to make the target visible, but do not remove any material.
X	4.	FMVSS 204 Targeting Requirements
X	4.1	Is an FMVSS 204 indicant test ordered on the "COTR Vehicle Work Order?"
	7.1	Yes, continue with this form.
		X No, this form is complete.
	4.2	Resection panel (Figure 28C)
	4.2.1	The panel deviates no more than 6 mm from perfect flatness when suspended
		vertically
	4.2.2	The 8 targets on the panel are circular targets at least 90 mm in diameter and with
		black and yellow quadrants.
	4.2.3	The center of each of the 4 outer targets are placed within 1 mm of the corners of
		a square measuring 914 mm on each side.
	4.2.4	Locate another square with 228 mm sides and with the center of this square
		coincident with the center of the 914 mm square.
	4.2.5	The center of the 4 inner targets are placed at the midpoints of each of the 228
		mm sides.
	4.3	Place a circular target at least 90 mm in diameter and with black and yellow
		quadrants on a material (cardboard, metal, etc.) that can be taped to the top of
		the steering column.
	4.4	Tape the target from 4.3 to the top of the steering column in a manner that does
<b>D -</b> • •	4 D. (C	not interfere with the movement of the steering column in a crash.
REM	ARKS:	
		Ben Story
Signa	ature:	Date: <u>8/31/15</u>

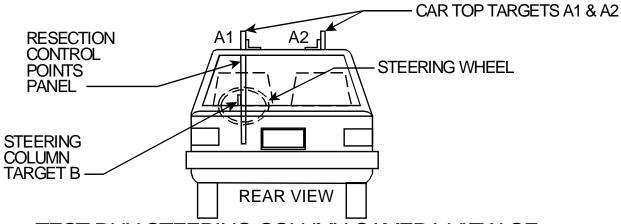
I certify that I have read and performed each instruction.

# **REFERENCE PHOTO TARGETS**

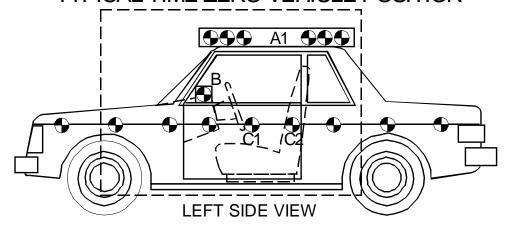


**LEFT SIDE VIEW** 

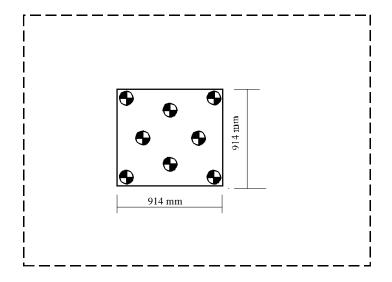
## RESECTION PANEL TARGETING ALIGNMENT



# TEST RUN STEERING COLUMN CAMERA VIEW OF TYPICAL TIME ZERO VEHICLE POSITION



# PRE-RUN STEERING COLUMN HIGH SPEED CAMERA VIEW



LEFT SIDE VIEW

## **DATA SHEET 35 CAMERA LOCATIONS**

Test Vehicle: 2015 Mazda 3 NHTSA No.: C20155402 FMVSS 208 Compliance 8/31/15 Test Program: Test Date:

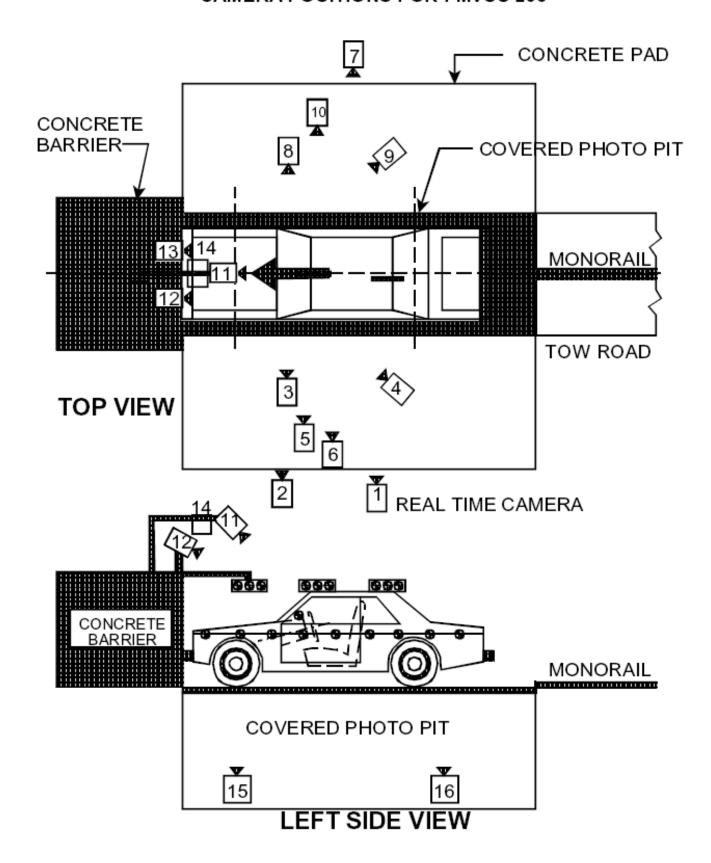
Time: 10:23 am

CAMERA NO.	VIEW	CAMERA POSITIONS (mm) *			LENS (mm)	SPEED (fps)
		Х	Υ	Z		
1	Real Time Left Side View				13	24
2	Left Side View (Barrier face to front seat backs)	1110	-5110	1180	24	1000
3	Left Side View (Driver)	1550	-6470	1900	35	1000
4	Left Side View (B-post aimed toward center of steering wheel)	5880	-5160	1950	50	1000
5	Left Side View (Steering Column)	550	-5260	1180	24	1000
6	Left Side View (Steering Column)	540	-5200	780	24	1000
7	Right Side View (Overall)	2280	6470	1170	20	1000
8	Right Side View (Passenger)	1630	6200	1880	35	1000
9	Right Side View (Angle)	5890	5160	1950	50	1000
10	Right Side View (Front door)	1130	5090	1120	24	1000
11	Front View Windshield	-310	0	2810	20	1000
12	Front View Driver	30	-450	2030	8.5	1000
13	Front View Passenger	30	450	2030	8.5	1000
14	Overhead Barrier Impact View	2020	0	4910	14	1000
15	Pit Camera Engine View	1480	0	-3150	24	1000
16	Pit Camera Fuel Tank View	3310	0	-3150	24	1000

## \*COORDINATES:

- +X forward of impact plane +Y right of monorail centerline +Z above ground level

## **CAMERA POSITIONS FOR FMVSS 208**



#### DATA SHEET 36

# APPENDIX G DUMMY POSITIONING PROCEDURES FOR DRIVER TEST DUMMY CONFORMING TO SUBPART O OF PART 572

Test Vehicle: 2015 Mazda 3 NHTSA No.: C20155402
Test Program: FMVSS 208 Compliance Test Date: 8/31/15

Test Technician: <u>Jon Miller</u>

IMPACT ANGLE:	0°							
BELTED DUMMIES (YES/NO):	NO							
TEST SPEED:	X 32 to 40 kmph		ph		0 to 48 kmph		0	to 56 kmph
DRIVER DUMMY:	X		5 <sup>th</sup> female				50 <sup>th</sup> male	
PASSENGER DUMMY:	X		5 <sup>th</sup> female				50 <sup>th</sup> male	

## 1. Seat Position

X\_1.1 Position the seat's adjustable lumbar supports so that the lumbar supports are in the lowest, retracted or deflated adjustment positions. (S16.2.10.1, S20.1.9.1, S20.4.1, S22.1.7.1)

 $X_N/A - No lumbar adjustment$ 

- X\_1.2 Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S16.2.10.2, S20.1.9.2, S20.4.1, S22.1.7.1, S22.4.2.1, S22.4.3.1, S24.4.2.1, S26.2.3, S26.3.1)
   X N/A No additional support adjustment
- X\_1.3 Position an adjustable leg support system in its rearmost position. (8/27/04 interpretation to Toyota)
   X N/A No adjustable leg support system
- X\_1.4 **Mark** a point (seat cushion reference point) on the side of the seat cushion that is between 150 mm and 250 mm from the front edge of the seat cushion. (S16.3.1.12)
- X\_1.5 Draw a line (seat cushion reference line) through the seat cushion reference point. (S16.3.1.13)
- <u>X\_1.6</u> Use only the controls that primarily move the seat in the fore-aft direction to move the seat cushion reference point to the rearmost position. (S16.2.10.3.1, S22.1.7.3)
- X\_1.7 If the seat cushion adjusts fore-aft, independent of the seat back, use only the controls that primarily move the seat cushion in the fore-aft direction to move the seat cushion reference point to the rearmost position. (S16.2.10.3.1, S20.1.9.3)
  X\_ N/A No independent fore-aft seat cushion adjustment
- X\_1.8 Use any part of any control, other than the parts just used for fore-aft positioning, to determine the range of angles of the seat cushion reference line and to set the seat cushion reference line at the mid-angle. (S16.2.10.3.1)

Maximum angle: 22.0° Nose Up Minimum angle: 17.8° Nose Up Mid-angle: 19.9° Nose Up

- X\_1.9 If the seat and/or seat cushion height is adjustable, use any part of any control other than the parts which primarily move the seat or seat cushion fore-aft, to put the seat cushion reference point in its lowest position with the seat cushion reference line angle at the mid-angle found in 1.8. (S16.2.10.3.1)
  \_\_N/A No seat height adjustment
- X\_1.10Use only the controls that primarily move the seat in the fore-aft direction to verify the seat is in the rearmost position.
- X\_1.11 Use only the controls that primarily move the seat in the fore-aft direction to mark the fore-aft seat positions. Mark each position so that there is a visual indication when the seat is at a particular position. For manual seats, move the seat forward one detent at a time and mark each detent. For power seats, mark only the rearmost, middle, and foremost positions. Label three of the positions with the following: F for foremost, M for mid-position (if there is no mid-position, label the closest adjustment position to the rear of the mid-point), and R for rearmost.
- <u>X</u>\_1.12Use only the controls that primarily move the seat in the fore-aft direction to place the seat in the rearmost position.
- X\_1.13Use any part of any control, other than the parts which primarily move the seat or seat cushion fore-aft, to find and visually **mark** the maximum, minimum, and middle height of the seat cushion reference point with the seat cushion reference line at the mid-angle determined in 1.8. (S20.1.9.4, S22.1.2, S22.1.7.4, S22.3.1, S22.4.3.1, S24.1.2, S24.3.1, S24.4.3.1, S26.2.3, S26.3.1)
  - \_\_ N/A No seat height adjustment. Go to 1.18
- X\_1.14Use only the controls that primarily move the seat and/or seat cushion in the fore-aft direction to place the seat in the mid-fore-aft position.
- X\_1.15Use any part of any control, other than the parts which primarily move the seat or seat cushion fore-aft, to find and visually **mark** the maximum, minimum, and middle height of the seat cushion reference point with the seat cushion reference line at the mid-angle determined in 1.8. (S20.1.9.4, S22.1.2, S22.1.7.4, S22.3.1, S24.1.2, S24.3.1)
- X\_1.16Use only the control that change the seat in the fore-aft direction to place the seat in the foremost position. (S16.2.10.3.2)
- X\_1.17Use any part of any control, other than the parts which primarily move the seat or seat cushion fore-aft, to find and visually **mark** the maximum, minimum, and middle height of the seat cushion reference point with the seat cushion reference line at the mid-angle determined in 1.8. (S16.2.10.3.3, S20.1.9.4, S22.1.2, S22.1.7.4, S22.3.1, S24.1.2, S24.3.1)
- X\_1.18. Is the seat a bucket seat? X\_Yes, go to 1.19 and skip 1.20
  - \_\_No, go to 1.20 and skip 1.19
- X 1.19Bucket seats:

Locate and **mark** for future reference the longitudinal centerline of the seat cushion. The intersection of the vertical longitudinal plane that passes through the SgRP and the seat cushion upper surface determines the longitudinal centerline of a bucket seat cushion. (S16.3.1.10 & S20.1.10)

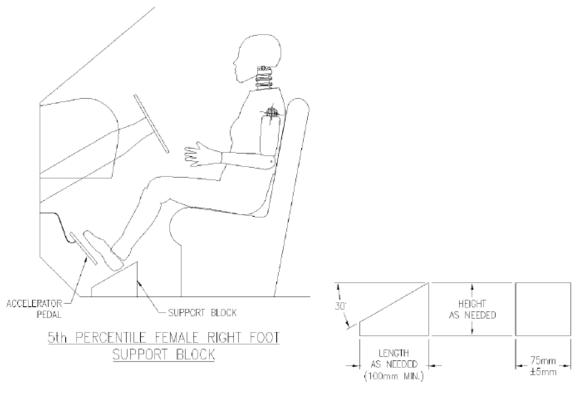
1.20	Bench seats (complete ONLY the one that is applicable to the seat being marked): Locate and <b>mark</b> for future reference the longitudinal line on the seat cushion that marks the intersection of the vertical longitudinal plane through the centerline of the steering wheel and the seat cushion upper surface.
2. Hea	d Restraint Position N/A Vehicle contains automatic head restraintsN/A, there is no head restraint adjustment Go to 3
<u>X</u> _2.1	Adjust the head restraint to its lowest position. (S16.2.10.2, S20.1.9.6, S20.4.1, S22.1.7.6, S22.4.2.1, S22.4.3.1, S24.4.3.1, S26.2.3, S26.3.1)
<u>X</u> _2.2 <i>i</i>	All adjustments of the head restraint shall be used to position it full forward. For example, if it rotates, rotate it such that the head restraint extends as far forward as possible.  Mark the foremost position. (S16.2.10.2 & S16.3.4.4 & S20.1.9.6, S20.4.1, S22.4.2.1, S22.4.3.1, S24.4.3.1, S26.2.3, S26.3.1)
<u>X</u> _2.3	Measure the vertical distance from the top most point of the head restraint to the bottom most point. Locate and <b>mark</b> a horizontal plane through the midpoint of this distance. (S16.3.4.3)  Vertical height of head restraint: 220 mm  Mid-point height: 110 mm
<u>X</u> _3. Is	the <b>steering wheel</b> adjustable up and down and/or in and out?  X_Yes – go to 3.1 No – Go to 4
<u>X</u> _3.1.	Find and <b>mark</b> for future reference each up and down position. Label three of the positions with the following: H for highest, M for mid-position (if there is no mid-position, label the next lowest adjustment position), and L for lowest. N/A - steering wheel is not adjustable up and down
<u>X</u> _3.2.	Find and <b>mark</b> for future references each in and out position. Label three of the Positions with the following: F for foremost, M for mid-position (if there is no mid-position, label the next rearmost adjustment position), and R for rearmost. N/A – steering wheel is not adjustable in and out.
<u>X</u> _3.3.	Use the markings to position the steering controls in the mid-position or if applicable next lowest detent position. (S16.2.9)
<u>X</u> _4.	Place the SCRP in the full rearward, mid-height position, and mid-seat cushion angle, determined in Item 1. (S16.3.2.1.1)
<u>X</u> _5.	If the vehicle has an adjustable accelerator pedal, place it in the full forward position. (S16.3.2.2.1) $\underline{X}$ N/A accelerator pedal not adjustable
<u>X</u> _6.	Fully recline the seat back. (S16.3.2.1.2) N/A seat back not adjustable.
<u>X</u> _7.	Place the dummy in the seat with the legs at an angle of 120 degrees to the thighs. The calves should not be touching the seat cushion. (S16.3.2.1.2)
<u>X</u> _8.	Position the dummy in the seat such that the midsagittal plane is coincident with the longitudinal seat cushion markings as determined in Item 1.19 or 1.20. (S16.3.2.1.3 and S16.3.2.1.4)

<u>X</u> _9.	Hold down the dummy's thighs and push rearward on the upper torso to maximize the pelvic angle. (S16.3.2.1.5)
<u>X</u> _10.	Set the angle between the legs and the thighs to 120 degrees. (S16.3.2.1.6)
<u>X</u> _11.	Set the transverse distance between the centers of the front of the knees at 160 to 170 mm. (6.3 to 6.7 inches) Center the knee separation with respect to the longitudinal seat cushion marking as determined in Item 1.19 or 1.20. (S16.3.2.1.6)  Record Knee Separation: 165 mm
<u>X</u> _12.	Push rearward on the dummy's knees until the pelvis contacts the seat back, or the backs of the calves contact the seat cushion, whichever occurs first. (S16.3.2.1.6)  X Pelvis contacted seat back.  Calves contacted seat cushion.
<u>X</u> _13.	Gently rock the upper torso $\pm$ 5 degrees (approximately 51 mm (2 inches)) side-to-side three times. (S16.3.2.1.7)
<u>X</u> _14.	If needed, extend the legs until the feet do not contact the floor pan. The thighs should be resting on the seat cushion. (S16.3.2.1.8)
<u>X</u> _15.	Position the right foot until the foot is in line with a longitudinal vertical plane passing through the center of the accelerator pedal. Maintain the leg and thigh in a vertical plane. (S16.3.2.1.8)
<u>X</u> _16.	Rotate the left leg and thigh laterally to equalize the distance between each knee and the longitudinal seat cushion marking as determined in Item 1.19 or 1.20. (S16.3.2.1.8)
<u>X</u> _17.	Attempt to return the seat to the foremost fore-aft position, mid-height, and seat cushion mid-angle as determined in Item 1. The foot may contact and depress the accelerator and/or change the angle of the foot with respect to the leg. (S16.3.2.1.8)  X_ Foremost position achieved. Proceed to step 22.  Foremost not achieved because of foot interference. Proceed to step 19.  Foremost not achieved because of steering wheel contact.
18.	If either of the dummy's legs contact the steering wheel, move the steering wheel up the minimum amount required to avoid contact. If the steering wheel is not adjustable separate the knees the minimum required to avoid contact. (S16.3.2.1.8) N/A- there was no leg contactSteering wheel repositionedKnees separated
19.	If the left foot interferes with the clutch or brake pedals, rotate the left foot about the leg to provide clearance. If this is not sufficient, rotate the thigh outboard at the hip the minimum amount required for clearance. (S16.3.2.1.8)  N/A, No foot interference with pedals Foot adjusted to provide clearance Foot and Thigh adjusted to provide clearance.

20.	Continue to move the seat. Use seat controls to line up the seat markings determined during item 1 to set the foremost fore-aft position, mid-height position and the seat cushion mid-angle. If the dummy contacts the interior move the seat rearward until a maximum clearance of 5 mm (0.2 inches) is achieved or the seat is in the closest detent position that does not cause dummy contact. (S16.3.2.1.8) Foremost, mid-height position and the seat cushion mid-angle reachedDummy Contact. Clearance set at maximum of 5 mm
21.	If the steering wheel was repositioned in step 18, return the steering wheel to the original position. If the steering wheel contacts the dummy before reaching the original position, position the wheel until a maximum clearance of 5 mm (.2 inches) is achieved, or the steering wheel is in the closest detent position that does not cause dummy contact. (S16.3.2.1.8) N/A Steering wheel was not repositionedOriginal position achievedDummy Contact. Clearance set at maximum of 5 mm  Measured Clearance: Dummy Contact. Steering wheel set at nearest detent position.  Steering wheel position: detent positions upward of original position. (Original position is position zero)
<u>X</u> _22.	If the seat back is adjustable, rotate the seat back forward while holding the thighs in place. Continue rotating the seat back forward until the transverse instrument platform of the dummy head is level ± 0.5 degrees. If the head cannot be leveled using the seat back adjustment, or the seat back is not adjustable, use the lower neck bracket adjustment to level the head. If a level position cannot be achieved, minimize the angle. (S16.3.2.1.9)  X_Head Level Achieved. (Check all that apply)  X_Head leveled using the adjustable seat back  Head Angle:
<u>X</u> _23.	Verify the pelvis is not interfering with the seat bight. (S16.3.2.1.9)  X_No interference  Pelvis moved forward the minimum amount so that it is not caught in the seat bight.
<u>X</u> _24.	Verify the dummy abdomen is properly installed. (S16.3.2.1.9)  X_Abdomen still seated properly into dummy Abdomen was adjusted because it was not seated properly into dummy
<u>X</u> _25.	Head Angle $\underline{X}_N/A$ , neither the pelvis nor the abdomen were adjusted.
<u>X</u> _25.1	Head still level (Go to 26)

25.2	Head level adjusted Head Level Achieved. (Check all that apply) Head leveled using the adjustable seat back Head leveled using the neck bracket.  Head Angle: degrees
	Head Level NOT Achieved. (Check all that apply)Head level adjusted using the adjustable seat backHead level adjusted using the neck bracket. Head Angle: degrees
<u>X</u> _26.	If the dummy torso contacts the steering wheel while performing step 22, reposition the steering wheel in the following order to eliminate contact. (S16.3.2.1.9) $\underline{X}$ N/A, No dummy torso contact with the steering wheel.
26.1	Adjust telescoping mechanism. N/A No telescoping adjustment. Adjustment performed (fill in appropriate change)  Steering wheel moved detent positions in the forward direction.  Steering wheel moved mm in the forward direction.
26.2	Adjust tilt mechanism. N/A No tilt adjustment. No adjustment performed. Adjustment performed. (circle one)  Steering wheel moved detent positions Upward/Downward.  Steering wheel moved degrees Upward/Downward
26.3	Adjust Seat in the aft direction. No Adjustment performed. Seat moved aft mm from original position. Seat moved aft detent positions from the original position.
<u>X</u> _27.	Measure and set the pelvic angle using the pelvic angle gage TE-2504. The pelvic angle should be 20.0 degrees $\pm$ 2.5 degrees. If the pelvic angle cannot be set to the specified range because the head will not be level or because the dummy will have need major repositioning, adjust the pelvis as closely as possible to the angle range, but keep the head level. (S16.3.2.1.11) $\underline{X}$ Pelvic angle set to 20.0 degrees $\pm$ 2.5 degrees. Pelvic angle of 20.0 degrees not achieved, the angular difference was minimized. $\underline{X}$ Record the pelvic angle: $\underline{21.1}$ degrees
<u>X</u> _28.	Check the dummy for contact with the interior after completing adjustments. (S16.3.2.1.12)  X_No contactDummy in contact with interiorSeat moved aft mm from the previous positionSeat moved aft detent positions from the previous position.
<u>X</u> _29.	Check the dummy to see if additional interior clearance is obtained, allowing the seat to be moved forward. (S16.3.2.1.12)  X_N/A, Seat already at foremost position. Clearance unchanged. No adjustments required. Additional clearance available Seat moved Forward mm from the previous position. Seat moved Forward detent positions from the previous position.

<u>X</u> _30.	Driver's foot positioning, right foot. Place the foot perpendicular to the leg and determine if the heel contacts the floor pan at any leg position. If the heel contacts the floor pan proceed to step 31 otherwise, proceed to step 32. (S16.3.2.2.1)
<u>X</u> _31.	Perform the following steps until either all steps are completed, or the foot contacts the accelerator pedal. Step 31.6 shall be completed in all cases. (S16.3.2.2.1 (a))
<u>X</u> _31.1	With the rear of the heel contacting the floor pan, move the foot forward until pedal contact occurs or the foot is at the full forward position.
31.2	If the vehicle has an adjustable accelerator pedal, move the pedals rearward until pedal contact occurs or the pedals reach the full rearward position.
31.3	Extend the leg, allowing the heel to lose contact with the floor until the foot contacts the pedal. Do not raise the toe of the foot higher than the top of the accelerator pedal. If the foot does not contact the pedal, proceed to the next step. If pedal contact does occur, place a tapered foam block as shown in Figure G1 under the heel with the shallow part of the taper facing forward. (S16.3.2.2.3)
31.4	Angle the foot to achieve contact between the foot and the pedal. If the foot does not contact the pedal, return the foot to the perpendicular orientation. If pedal contact does occur, place a tapered foam block as shown in Figure G1 under the heel with the shallow part of the taper facing forward. (S16.3.2.2.3)
31.5	Align the centerline of the foot with the vertical-longitudinal plane passing through the center of the accelerator pedal. Place a tapered foam block as shown in Figure G1 under the heel with the shallow part of the taper facing forward. (S16.3.2.2.3)
	Record foot position  X_Pedal Contact achieved. Contact occurred at step <u>31.1</u> .  X_Heel contacts floor pan  Heel set mm from floor pan Pedal Contact not achieved. Heel set mm from the floor pan.



SUPPORT BLOCK DETAIL

## FIGURE G1

32.	Perform the followi	ng steps ι	until either all	steps are	completed,	or the foot	contacts	the
	accelerator pedal.	Step 30.5	shall be cor	npleted in	all cases.			

- \_\_32.1 Extend the leg until the foot contacts the pedal. Do not raise the toe of the foot higher than the top of the accelerator pedal. If the foot does not contact the pedal, proceed to the next step. If pedal contact does occur, place a tapered foam block as shown in Figure G1 under the heel with the shallow part of the taper facing forward. (S16.3.2.2.1 (b) & S16.3.2.2.3)
- \_\_32.2 If the vehicle has an adjustable accelerator pedal, move the pedals rearward until pedal contact occurs or the pedals reach the full rearward position. If pedal contact does occur, place a tapered foam block as shown in Figure G1 under the heel with the shallow part of the taper facing forward. (S16.3.2.2.1 (b) & S16.3.2.2.3)

  N/A No pedal adjustment
- \_\_32.3 Angle the foot to achieve contact between the foot and the pedal. If the foot does not contact the pedal, return the foot to the perpendicular orientation. If pedal contact does occur, place a tapered foam block as shown in Figure G1 under the heel with the shallow part of the taper facing forward. (S16.3.2.2.2 & S16.3.2.2.3)
- \_\_32.4 Align the centerline of the foot in the same horizontal plane as the centerline of the accelerator pedal. Place a tapered foam block as shown in Figure G1 under the heel with the shallow part of the taper facing forward. (S16.3.2.2.3)

32.5 Record foot position	
Pedal Contact achieved. Contact occurred at s	tep
Heel set mm from floor pan.	
Pedal Contact not achieved. Heel set m	nm from the floor pan.

- X\_33. Driver's foot positioning, left foot.
- $\underline{X}$ \_33.1 Place the foot perpendicular to the leg and determine if the heel contacts the floor pan at any leg position. If the heel contacts the floor pan proceed to step 33.2, otherwise position the leg as perpendicular to the thigh as possible with the foot parallel to the floor pan. (S16.2.2.6)
- X\_33.2 Place the foot on the toe board with the heel resting on the floor pan as close to the intersection of the floor pan and the toe board as possible. Adjust the angle of the foot if necessary to contact the toe board. If the foot will not contact the toe board, set the foot perpendicular to the leg, and set the heel on the floor pan as far forward as possible. Avoid contact with the brake pedal, clutch pedal, wheel well projection, and footrest. To avoid this contact use the following three manipulations in the order listed, with each subsequent option incorporating the previous, until contact is avoided: rotate the foot about the lower leg (abduction/adduction), plantar flex the foot, rotate the leg outboard about the hip. Movement should be the minimum amount necessary. If it is not possible to avoid all foot contact, give priority to avoiding brake or clutch pedal contact. (S16.2.2.4 & S16.2.2.5 & S16.2.2.7)

X_No contact
Foot rotated about the leg (abduction/adduction)
Foot rotated about the leg, and foot plantar flexed
_Foot rotated about the leg, foot plantar flexed, and the leg rotated about the
nip.

- X\_33.3 Record foot position.
  - \_\_Heel does not contact floor pan.
  - \_\_Heel on floor pan and foot on toe board.
  - X\_Heel on floor pan and foot not on toe board.
- X\_34. Driver arm/hand positioning.
- X\_34.1 Place the dummy's upper arms adjacent to the torso with the arm centerlines as close to a vertical longitudinal plane as possible. (S16.3.2.3.1)
- X\_34.2 Place the palms of the dummy in contact with the outer part of the steering wheel rim at its horizontal centerline with the thumbs over the steering wheel rim. (S16.3.2.3.2)
- \_\_34.3 If it is not possible to position the thumbs inside the steering wheel rim at its horizontal centerline, then position them above and as close to the horizontal centerline of the steering wheel rim as possible. (S16.3.2.3.3)
- X\_34.4Lightly tape the hands to the steering wheel rim so that if the hand of the test dummy is pushed upward by a force of not less than 9 N (2 lb) and not more than 22 N (5 lb), the tape releases the hand from the steering wheel rim. (S16.3.2.3.4)
- X\_35. Adjustable head restraints
  \_\_N/A, there is no head restraint adjustment
- \_\_35.1 If the head restraint has an automatic adjustment, leave it where the system positions the restraint after the dummy is placed in the seat. (S16.3.4.1) Go to 36.
- \_\_35.2 Adjust each head restraint vertically so that the mid-horizontal plane determined in Item 2 is aligned with the center of gravity (CG) of the dummy head. (S16.3.4.3)

<ul> <li>X_35.3 If the above position is not attainable, move the vertical center of the head restraint to the closest detent below the center of the head CG. (S16.3.4.3)</li> <li>N/A midpoint position attained in previous step</li> <li>X_Headrest set at nearest detent below the head CG</li> </ul>
X 35.4If the head restraint has a fore and aft adjustment, place the restraint in the foremost position or until contact with the head is made, whichever occurs first. (S16.3.4.4)
<ul> <li>X_36. Driver and passenger manual belt adjustment (for tests conducted with a belted dummy). (S16.3.5)</li> <li>X_ N/A Dummies are unbelted for this test.</li> </ul>
36.1 If an adjustable seat belt D-ring anchorage exists, place it in the manufacturer's design position for a 5th percentile adult female. (S16.3.5.1) <b>This information will be supplied by the COTR.</b> Manufacturer's specified position:  Actual Position:
36.2 Place the Type 2 manual belt around the test dummy and fasten the latch. (S16.3.5.2)
36.3 Ensure that the dummy's head remains as level as possible. (S16.3.5.3)
36.4 Remove all slack from the lap belt. Pull the upper torso webbing out of the retractor and allow it to retract; repeat this operation four times. Apply a 9 N (2 lbf) to 18 N (4 lbf) tension load to the lap belt. If the belt system is equipped with a tension-relieving device, introduce the maximum amount of slack into the upper torso belt that is recommended by the manufacturer. If the belt system is not equipped with a tension-relieving device, allow the excess webbing in the shoulder belt to be retracted by the retractive force of the retractor. (S16.3.5.4)
I certify that I have read and performed each instruction.
Signature: Date: 8/31/15

#### **DATA SHEET 36**

# APPENDIX G DUMMY POSITIONING PROCEDURES FOR PASSENGER TEST DUMMY CONFORMING TO SUBPART O OF PART 572

Test Vehicle: 2015 Mazda 3 NHTSA No.: C20155402
Test Program: FMVSS 208 Compliance Test Date: 8/31/15

Test Technician: <u>Jon Miller</u>

IMPACT ANGLE:	0°						
BELTED DUMMIES (YES/NO):	NO						
TEST SPEED:	Χ	32 to 40 km	ph		0 to 48	kmph	0 to 56 kmph
DRIVER DUMMY:	X		5		5 <sup>th</sup> female		50 <sup>th</sup> male
PASSENGER DUMMY:		X		5 <sup>th</sup> female			 50 <sup>th</sup> male

\_\_The passenger seat adjustments are controlled by the adjustments made to the driver's seat. Therefore, positioning of the passenger dummy is made simultaneously with the driver dummy. Adjustments made to the seat to position the driver will override any adjustments that would normally be made to position the passenger. (S16.2.10.3)

#### 1. Seat Position

- X\_1.1 Position the seat's adjustable lumbar supports so that the lumbar supports are in the lowest, retracted or deflated adjustment positions. (S16.2.10.1, S20.1.9.1, S20.4.1, S22.1.7.1)
  - X N/A No lumbar adjustment
- X\_1.2 Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S16.2.10.2, S20.1.9.2, S20.4.1, S22.1.7.1, S22.4.2.1, S22.4.3.1, S24.4.2.1, S26.2.3, S26.3.1)
   X\_N/A No additional support adjustment
- X\_1.3 Position an adjustable leg support system in its rearmost position. (8/27/04 interpretation to Toyota)
  - $X_N/A$  No adjustable leg support system
- X\_1.4 **Mark** a point (seat cushion reference point) on the side of the seat cushion that is between 150 mm and 250 mm from the front edge of the seat cushion. (S16.3.1.12)
- X\_1.5 Draw a line (seat cushion reference line) through the seat cushion reference point. (S16.3.1.13)
- <u>X\_1.6</u> Use only the controls that primarily move the seat in the fore-aft direction to move the seat cushion reference point to the rearmost position. (S16.2.10.3.1, S22.1.7.3)
- X\_1.7 If the seat cushion adjusts fore-aft, independent of the seat back, use only the controls that primarily move the seat cushion in the fore-aft direction to move the seat cushion reference point to the rearmost position. (S16.2.10.3.1, S20.1.9.3)
  - X N/A No independent fore-aft seat cushion adjustment

X_1.8 Use any part of any control, other than the parts just used for fore-aft positioning, to determine the range of angles of the seat cushion reference line and to set the seat cushion reference line at the mid-angle. (S16.2.10.3.1) Maximum angle: Minimum angle: Mid-angle:
X_1.9 If the seat and/or seat cushion height is adjustable, use any part of any control other than the parts which primarily move the seat or seat cushion fore-aft, to put the seat cushion reference point in its lowest position with the seat cushion reference line angle at the mid-angle found in 1.8. (S16.2.10.3.1) X N/A – No seat height adjustment
X_1.10 Use only the controls that primarily move the seat in the fore-aft direction to verify the seat is in the rearmost position.
X_1.11 Use only the controls that primarily move the seat in the fore-aft direction to mark the fore-aft seat positions. Mark each position so that there is a visual indication when the seat is at a particular position. For manual seats, move the seat forward one detent at a time and mark each detent. For power seats, mark only the rearmost, middle, and foremost positions. Label three of the positions with the following: F for foremost, M for mid-position (if there is no mid-position, label the closest adjustment position to the rear of the mid-point), and R for rearmost.
X_1.12 Use only the controls that primarily move the seat in the fore-aft direction to place the seat in the rearmost position.
X_1.13 Use any part of any control, other than the parts which primarily move the seat or seat cushion fore-aft, to find and visually <b>mark</b> the maximum, minimum, and middle height of the seat cushion reference point with the seat cushion reference line at the mid-angle determined in 1.8. (S20.1.9.4, S22.1.2, S22.1.7.4, S22.3.1, S22.4.3.1, S24.1.2, S24.3.1, S24.4.3.1, S26.2.3, S26.3.1) X N/A – No seat height adjustment. Go to 1.18
1.14 Use only the controls that primarily move the seat and/or seat cushion in the fore-aft direction to place the seat in the mid-fore-aft position.
1.15 Use any part of any control, other than the parts which primarily move the seat or seat cushion fore-aft, to find and visually <b>mark</b> the maximum, minimum, and middle height of the seat cushion reference point with the seat cushion reference line at the mid-angle determined in 1.8. (S20.1.9.4, S22.1.2, S22.1.7.4, S22.3.1, S24.1.2, S24.3.1)
1.16 Use only the controls that change the seat in the fore-aft direction to place the seat in the foremost position. (S16.2.10.3.2)
1.17 Use any part of any control, other than the parts which primarily move the seat or seat cushion fore-aft, to find and visually <b>mark</b> the maximum, minimum, and middle height of the seat cushion reference point with the seat cushion reference line at the mid-angle determined in 1.8. (S16.2.10.3.3, S20.1.9.4, S22.1.2, S22.1.7.4, S22.3.1, S24.1.2, S24.3.1)
X_1.18. Is the seat a bucket seat?  X_Yes, go to 1.19 and skip 1.20 No, go to 1.20 and skip 1.19

X 1.19 Bucket seat	: seats	ıcket	В	19	. 1	-1	Х	
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Locate and **mark** for future reference the longitudinal centerline of the seat cushion. The intersection of the vertical longitudinal plane that passes through the SgRP and the seat cushion upper surface determines the longitudinal centerline of a bucket seat cushion. (S16.3.1.10 & S20.1.10)

#### 1.20 Bench seats:

Locate and **mark** the longitudinal centerline of the passenger seat cushion. The longitudinal centerline is the same distance from the longitudinal centerline of the vehicle as the center of the steering wheel. (S20.2.1.4, S22.2.1.3, S24.2.3, S20.4.4, S22.2.2.1 (b), S22.2.2.3 (b), S22.2.2.4 (a), S22.2.2.5 (a), S22.2.2.6 (a), S22.2.2.7 (a), S24.2.3 (a))

Record the distance from the longitudinal centerline of the vehicle to the center of the steering wheel. \_\_\_\_\_

Record the distance from the longitudinal centerline of the vehicle to the longitudinal centerline of the seat cushion. (The vertical plane through this longitudinal centerline is Plane B for suppression.)

#### 2. Head Restraint Position

- \_\_N/A Vehicle contains automatic head restraints.
- \_\_N/A, there is no head restraint adjustment Go to 3
- <u>X</u>\_2.1 Adjust the head restraint to its lowest position. (S16.2.10.2, S20.1.9.6, S20.4.1, S22.1.7.6, S22.4.2.1, S22.4.3.1, S24.4.3.1, S26.2.3, S26.3.1)
- X\_2.2 All adjustments of the head restraint shall be used to position it full forward. For example, if it rotates, rotate it such that the head restraint extends as far forward as possible. **Mark** the foremost position. (S16.2.10.2 & S16.3.4.4 & S20.1.9.6, S20.4.1, S22.4.2.1, S22.4.3.1, S24.4.3.1, S26.2.3, S26.3.1)
- X\_2.3 Measure the vertical distance from the top most point of the head restraint to the bottom most point. Locate and **mark** a horizontal plane through the midpoint of this distance. (S16.3.4.3)

Vertical height of head restraint: <u>220</u> mm Mid-point height: 110 mm

- X\_3. Place the SCRP in the full rearward, mid-height position, and mid-seat cushion angle. (S16.3.3.1.1)
- X\_4. Fully recline the seat back. (S16.3.3.1.2)N/A seat back not adjustable.
- X\_5. Place the dummy in the seat with the legs at an angle of 120 degrees to the thighs. The calves should not be touching the seat cushion. (S16.3.3.1.2)
- X\_6. Position the dummy in the seat such that the midsagittal plane is coincident with the longitudinal seat cushion marking that was determined in item 1.19 or 1.20. (S16.3.3.1.3 and S16.3.3.1.4)
- X\_7. Hold down the dummy's thighs and push rearward on the upper torso to maximize the pelvic angle. (S16.3.3.1.5)
- X\_8. Set the angle between the legs and the thighs to 120 degrees. (S16.3.3.1.6)

<u>X</u> _9.	Set the transverse distance between the centers of the front of the knees at 160 to 170 mm. (6.3 to 6.7 inches). Center the knee separation with respect to the longitudinal seat cushion marking that was determined in item 1.19 or 1.20. (S16.3.3.1.6)  Record Knee Separation: 165 mm
<u>X</u> _10.	Push rearward on the dummy's knees until the pelvis contacts the seat back, or the backs of the calves contact the seat cushion, whichever occurs first. (S16.3.3.1.6)  X Pelvis contacted seat back. Calves contacted seat cushion.
<u>X</u> _11.	Gently rock the upper torso $\pm5$ degrees (approximately 51 mm (2 inches)) side-to-side three times. (S16.3.3.1.7)
<u>X</u> _12.	If needed, extend the legs until the feet do not contact the floor pan. The thighs should be resting on the seat cushion. (S16.3.3.1.8)
<u>X</u> _13.	Use seat controls to line up the seat markings determined during the completion of item 1 to set the foremost fore-aft position, mid-height position and the seat cushion midangle. If the dummy contacts the interior move the seat rearward until a maximum clearance of 5 mm (0.2 inches) is achieved or the seat is in the closest detent position that does not cause dummy contact. (S16.3.3.1.8)  X_Foremost, mid-height position and the seat cushion mid-angle reached Dummy Contact. Clearance set at maximum of 5 mm  Measured Clearance:Dummy Contact. Seat set at nearest detent position.  Seat position detent positions rearward of foremost (foremost is position zero)
<u>X</u> _14.	If the seat back is adjustable, rotate the seat back forward while holding the thighs in place. Continue rotating the seat back forward until the transverse instrument platform of the dummy head is level ± 0.5 degrees. If head cannot be leveled using the seat back adjustment, or the seat back is not adjustable, use the lower neck bracket adjustment to level the head. If a level position cannot be achieved, adjust the head as closely as possible to the ± 0.5 degree range. (S16.3.3.1.9 and S16.3.3.1.10) (Check All That Apply) Seat back not adjustableSeat back not independent of driver side seat back X_Head Level Achieved. (Check all that apply)  X_Head leveled using the adjustable seat backHead leveled using the neck bracket.  Head Angle:0.4 degreesHead adjusted using the adjustable seat backHead adjusted using the neck bracket. Head Angle: degrees
<u>X</u> _15.	Verify the pelvis is not interfering with the seat bight. (S16.3.3.1.9)  X_No interference Pelvis moved forward the minimum amount so that it is not caught in the seat bight.
<u>X</u> _16.	Verify the dummy abdomen is properly installed. (S16.3.3.1.9)  X_Abdomen still seated properly into dummy  _Abdomen was adjusted because it was not seated properly into dummy
<u>X</u> _17.	Head Angle X_N/A, neither the pelvis nor the abdomen were adjusted.

17.1 Head still level (Go to 18)
17.2 Head level adjustedHead Level Achieved. (Check all that apply)Head leveled using the adjustable seat backHead leveled using the neck bracketHead Angle:
<ul> <li>X_18. Measure and set the pelvic angle using the pelvic angle gage TE-2504. The pelvic angle should be 20.0 degrees ± 2.5 degrees. If the pelvic angle cannot be set to the specified range because the head will not be level or because the dummy will have need major repositioning, adjust the pelvis as closely as possible to the angle range, but keep the head level.</li> <li>X_Pelvic angle set to 20.0 degrees ± 2.5 degrees.</li> <li>Pelvic angle of 20.0 degrees not achieved, the angular difference was minimized.</li> <li>X_Record the pelvic angle: 21.8 degrees</li> </ul>
<ul> <li>X_19. Check the dummy for contact with the interior after completing adjustments.</li> <li>X_No Contact.</li> <li>Dummy in contact with interior.</li> <li>Seat moved aft mm from the previous position.</li> <li>Seat moved aft detent positions from the previous position.</li> </ul>
<ul> <li>X_20. Verify the transverse instrument platform of the dummy head is level +/- 0.5 degrees. Use the lower neck bracket adjustment to level the head. If a level position cannot be achieved, minimize the angle. (S16.3.3.1.9, S16.3.3.1.10, and S16.3.3.1.11)</li> <li>X_Head Level Achieved</li></ul>
<ul> <li>X_21. Check the dummy to see if additional interior clearance is obtained, allowing the seat to be moved forward. (S16.3.3.1.12)        N/A Bench Seat        N/A Seat already at full forward position.         X_Clearance unchanged. No adjustments required.        Additional clearance available        Seat moved Forward mm from the previous position.        Seat moved Forward detent positions from the previous position.        Seat moved Forward, Full Forward position reached.</li> </ul>
$\underline{X}$ _22. Passenger foot positioning. (Indicate final position achieved) (S16.3.3.2)
$\underline{X}$ _22.1 Place feet flat on the toe board; OR (S16.3.3.2.1)
22.2 If the feet cannot be placed flat on the toe board, set the feet perpendicular to the lower leg, and rest the heel as far forward on the floor pan as possible; OR (S16.3.3.2.2)
22.3 If the heels do not touch the floor pan, set the legs as perpendicular to the thighs as possible and set the feet parallel to the floor pan. (S16.3.3.2.2)

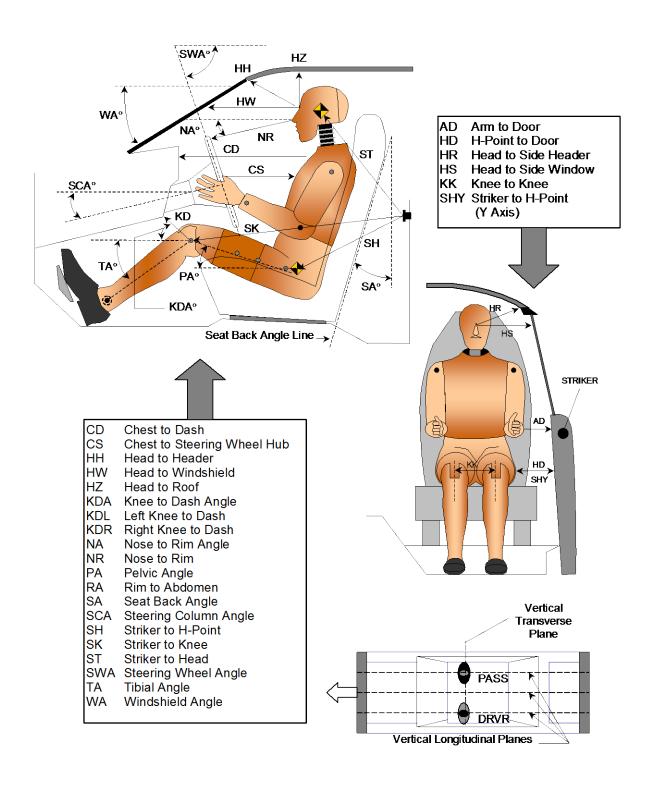
X_23. Passenger arm/hand positioning. (\$16.3.3.3)
X_23.1 Place the dummy's upper arms adjacent to the torso with the arm centerlines as close to a vertical longitudinal plane as possible. (S16.3.3.3.1)
$\underline{X}$ _23.2 Place the palms of the dummy in contact with the outer part of the thighs (S16.3.3.3.2)
$\underline{X}$ _23.3 Place the little fingers in contact with the seat cushion. (S16.3.3.3.3)
X_24. Adjustable head restraints (S16.3.4)N/A, there is no head restraint adjustment
24.1 If the head restraint has an automatic adjustment, leave it where the system positions the restraint after the dummy is placed in the seat. (S16.3.4.1) Go to 25.
24.2 Adjust each head restraint vertically so that the horizontal plane determined in Item 2 is aligned with the center of gravity (CG) of the dummy head. (S16.3.4.3)
<ul> <li>X_24.3 If the above position is not attainable, move the vertical center of the head restraint to the closest detent below the center of the head CG. (S16.3.4.3)</li> <li>N/A midpoint position attained in previous step</li> <li>X_Headrest set at nearest detent below the head CG</li> </ul>
24.4 If the head restraint has a fore and aft adjustment, place the restraint in the foremost position or until contact with the head is made, whichever occurs first. (S16.3.4.4)
$\underline{X}$ _25. Manual belt adjustment (for tests conducted with a belted dummy) (S16.3.5) $\underline{X}$ _N/A, Unbelted test
25.1 If an adjustable seat belt D-ring anchorage exists, place it in the manufacturer's design position for a 5th percentile adult female. <b>This information will be supplied by the COTR.</b> (S16.3.5.1)  Manufacturer's specified position: Actual Position:
25.2 Place the Type 2 manual belt around the test dummy and fasten the latch. (S16.3.5.2)
25.3 Ensure that the dummy's head remains as level as possible. (S16.3.5.3)
25.4 Remove all slack from the lap belt. Pull the upper torso webbing out of the retractor and allow it to retract; repeat this operation four times. Apply a 9 N (2 lbf) to 18 N (4 lbf) tension load to the lap belt. If the belt system is equipped with a tension-relieving device, introduce the maximum amount of slack into the upper torso belt that is recommended by the manufacturer. If the belt system is not equipped with a tension-relieving device, allow the excess webbing in the shoulder belt to be retracted by the retractive force of the retractor. (S16.3.5.4)
I certify that I have read and performed each instruction.
Signature: Date: 8/31/15

## DATA SHEET 37 DUMMY MEASUREMENTS

Test Vehicle: 2015 Mazda 3 NHTSA No.: C20155402
Test Program: FMVSS 208 Compliance Test Date: 8/31/15

Test Technician: Jon Miller

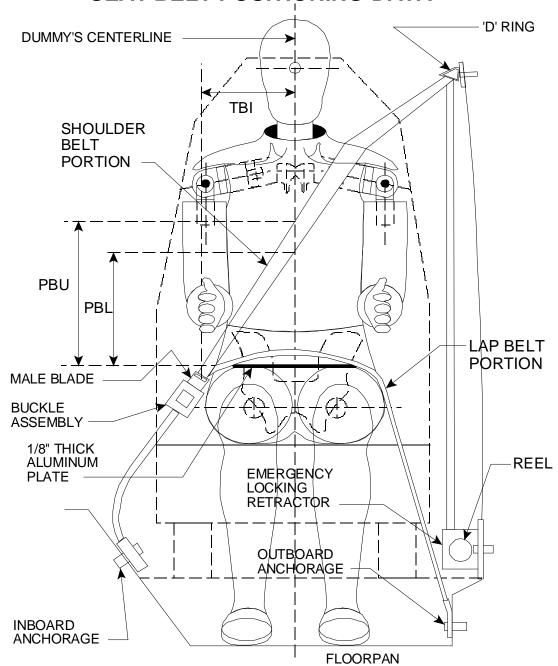
#### DUMMY MEASUREMENTS FOR FRONT SEAT OCCUPANTS



## **TEST DUMMY POSITION MEASUREMENTS**

Codo	Magazzament Description	Driver St	N 510	Passenger SN 511		
Code	Measurement Description	Length (mm)	Angle (°)	Length (mm)	Angle (°)	
WA	Windshield Angle		22.2			
SWA	Steering Wheel Angle		67.2			
SCA	Steering Column Angle		22.8			
SA	Seat Back Angle (On Headrest Pole)		3.0		2.3	
HZ	Head to Roof (Z)	201		208		
НН	Head to Header	250	53.2	283	54.2	
HW	Head to Windshield	609	0.0	627	0.0	
HR	Head to Side Header (Y)	258		257		
NR	Nose to Rim	260	3.0			
CD	Chest to Dash	432		377		
CS	Chest to Steering Hub	185	12.2			
RA	Rim to Abdomen	89	0.0			
KDL	Left Knee to Dash	97	35.7	90		
KDR	Right Knee to Dash	108		102	32.4	
PA	Pelvic Angle		21.1		21.8	
TA	Tibia Angle		46.5		44.9	
KK	Knee to Knee (Y)	270		224		
SK	Striker to Knee	619	103.6	664	98.8	
ST	Striker to Head	450	25.2	436	25.2	
SH	Striker to H-Point	353	121.1	377	114.6	
SHY	Striker to H-Point (Y)	309		310		
HS	Head to Side Window	372		367		
HD	H-Point to Door (Y)	180		184		
AD	Arm to Door (Y)	84		87		
AA	Ankle to Ankle	251		158		

## **SEAT BELT POSITIONING DATA**



FRONT VIEW OF DUMMY

#### **SEAT BELT POSITIONING MEASUREMENTS**

Measurement Description	Units	Driver	Passenger
PBU - Top surface of reference to belt upper edge	mm	N/A	N/A
PBL - Top surface of reference to belt lower edge	mm	N/A	N/A

## **DATA SHEET 38**

#### **CRASH TEST**

Test Vehicle: 2015 Mazda 3 NHTSA No.: C20155402 Test Program: FMVSS 208 Compliance Test Date: 8/31/15

Ben Storev Test Technician:

IMPACT ANGLE:	0°							
BELTED DUMMIES (YES/NO):	NO							
TEST SPEED:	Χ	32 to 40 km	ph		0 to 48	kmph	(	to 56 kmph
DRIVER DUMMY:	X		5 <sup>th</sup> f		male			50 <sup>th</sup> male
PASSENGER DUMMY:		X		5 <sup>th</sup> female				50 <sup>th</sup> male

1. Vehicle underbody painted.

> 2. The speed measuring devices are in place and functioning.

3. The speed measuring devices are 1.0 m from the barrier (spec. 1.5 m) and 30 cm from the barrier (spec. is 30 cm).

Convertible top is in the closed position. 4.

X N/A, not a convertible.

5. Instrumentation and wires are placed so motion of dummies during impact is not affected.

6. Tires inflated to pressure on tire placard or if it does not have a tire placard because it is not a passenger car, then inflated to the tire pressure specified in the owner information.

250 kpa front left tire 250 kpa specified on tire placard or in owner information 250 kpa front right tire 250 kpa specified on tire placard or in owner information 250 kpa rear left tire 250 kpa specified on tire placard or in owner information 250 kpa rear right tire 250 kpa specified on tire placard or in owner information

- 7. Time zero contacts on barrier in place.
  - 8. Pre test zero and shunt calibration adjustments performed and recorded.
- 9. Dummy temperature meets requirements of section 12.2 of the test procedure.
- 10. Vehicle hood closed and latched.
- 11. Transmission placed in neutral.
- Parking brake off. 12.
  - 13. Are the heads still level?

Yes, go to 14 No, Adjust dummy so that head is at the angle recorded in the Appendix F or G data sheets and then continue.

- 14. Ignition in the ON position.
- 15. Doors closed and latched but not locked.
  - 16. Post test zero and shunt calibration checks performed and recorded.
- 17. Actual test speed: 39.5 kmph
- Vehicle rebound from the barrier: 206 cm 18.
- 19. Describe whether the doors open after the test and what method is used to open the doors.
  - Left Front Door: Door remained closed and latched; Door opened without tools.
  - X Right Front Door: Door remained closed and latched; Door opened without tools.
  - Left Rear Door: Door remained closed and latched; Door opened without tools.
  - X Right Rear Door: Door remained closed and latched; Door opened without tools.

X 20.	Describe the contact points of the dummy with the interior of the vehicle.
	X Driver Dummy: Head to Air Bag and Headrest; Chest to Air Bag; Knees to Knee
	Bolster
	X Passenger Dummy: Head to Air Bag and Headrest; Chest to Air Bag; Knees to
	Glove Box
REMARKS:	
	R. Star
Signature: _	Date: <u>8/31/15</u>

I certify that I have read and performed each instruction.

### **DATA SHEET 40**

## **ACCIDENT INVESTIGATION MEASUREMENTS**

2015 Mazda 3 FMVSS 208 Compliance Test Vehicle: C20155402 NHTSA No.: Test Program: Test Technician: Test Date: 8/31/15

Ben Storey

IMPACT ANGLE:	0°						
BELTED DUMMIES (YES/NO):	NO						
TEST SPEED:	Χ	32 to 40 km	ph		0 to 48	kmph	0 to 56 kmph
DRIVER DUMMY:		Χ	;	5 <sup>th</sup> fe	male		50 <sup>th</sup> male
PASSENGER DUMMY:		X		5 <sup>th</sup> female			50 <sup>th</sup> male

Vehicle Year/Make/Model/Body Style:	2015 Mazda 3 Passenger Car
VIN:	JM1BM1U77F1257430
Wheelbase:	2695 mm
Build Date:	01/15
Vehicle Size Category:	3
Test Weight:	1448.8 kg
Front Overhang:	927 mm
Overall Width:	1800 mm
Overall Length Center:	4577 mm

Accelerometer Data						
Location: As per measurements on Data Sheet 33						
Linearity: >99.9%						

Integration Algorithm:	Trapezoidal
Vehicle Impact Speed:	39.5 kmph
Time of Separation:	108.2 ms
Velocity Change:	43.5 kmph

### **CRUSH PROFILE**

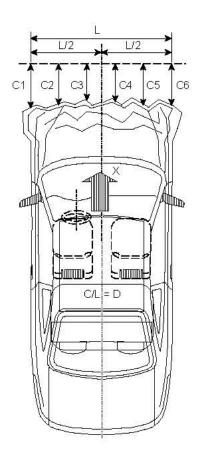
Collision Deformation Classification: 12FDEW3

Midpoint of Damage: Vehicle Longitudinal Centerline

Damage Region Length (mm): 1188

Impact Mode: Frontal Barrier

No.	Measurement Description	Units	Pre-Test	Post-Test	Difference
C1	Crush zone 1 at left side	mm	4429	4342	87
C2	Crush zone 2 at left side	mm	4520	4404	116
C3	Crush zone 3 at left side	mm	4505	4356	149
C4	Crush zone 4 at right side	mm	4505	4384	121
C5	Crush zone 5 at right side	mm	4520	4407	113
C6	Crush zone 6 at right side	mm	4429	4342	87



**REMARKS**:

Signature: \_\_\_\_\_ Date: <u>8/31/15</u>

I certify that I have read and performed each instruction.

#### **DATA SHEET 41**

### **WINDSHIELD MOUNTING (FMVSS 212)**

Test Vehicle:2015 Mazda 3NHTSA No.:C20155402Test Program:FMVSS 208 ComplianceTest Date:8/31/15

Test Technician: Ben Storey

IMPACT ANGLE:	0°							
BELTED DUMMIES (YES/NO):	NO							
TEST SPEED:	X	32 to 40 km	ph		0 to 48	kmph	0	to 56 kmph
DRIVER DUMMY:		X	;	5 <sup>th</sup> fe	male			50 <sup>th</sup> male
PASSENGER DUMMY:		X	;	5 <sup>th</sup> fe	male			50 <sup>th</sup> male

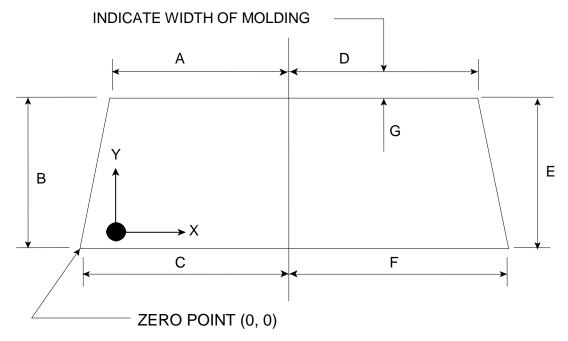
1. Pre-Crash Χ 1.1 Describe from visual inspection how the windshield is mounted and describe any trim material. Retained with glue Rubber and plastic trim 1.2 Mark the longitudinal centerline of the windshield. 1.3 Measure pre-crash A, B, and C for the left side and record in the chart below. 1.4 Measure pre-crash C, D, and E for the right side and record in the chart below. 1.5 Measure from the edge of the retainer or molding to the edge of the windshield. Dimension G (mm): 8 mm 2. Post Crash 2.1 Can a single thickness of copier type paper (as small a piece as necessary) slide between the windshield and the vehicle body? X No - Pass. Skip to the table of measurements, complete it by repeating the pre-crash measurements in the post crash column, and calculate the retention percentage, which will be 100%. Yes, go to 2.2 2.2 Visibly mark the beginning and end of the portions of the periphery where the paper slides between the windshield and the vehicle body. 2.3 Measure and record post-crash A, B, C, D, E, and F such that the measurements do not include any of the parts of the windshield where the paper slides between the windshield and the vehicle body. Calculate and record the percent retention for the right and left side of the 2.4 windshield. 2.5 Is total right side percent retention less than 75%? Yes, Fail No. Pass 2.6 Is total left side percent retention less than 75%? Yes, Fail No. Pass

#### **WINDSHIELD RETENTION MEASUREMENTS**

	Dimension	Pre-Crash (mm)	Post-Crash (mm)	Percent Retention (Post-Test ÷ Pre-Crash)
	Α	613	613	100%
Left Side	В	843	843	100%
Leit Side	С	716	716	100%
	Total	2172	2172	100%
	D	613	613	100%
Dight Cido	Е	843	843	100%
Right Side	F	716	716	100%
	Total	2172	2172	100%

Indicate area of mounting failure: NONE

## FRONT VIEW OF WINDSHIELD



**REMARKS**:

Signature: \_\_\_\_\_ Date: <u>8/31/15</u>

I certify that I have read and performed each instruction.

## DATA SHEET 42 WINDSHIELD ZONE INTRUSION (FMVSS 219)

Test Vehicle: 2015 Mazda 3 NHTSA No.: C20155402
Test Program: FMVSS 208 Compliance Test Date: 8/31/15

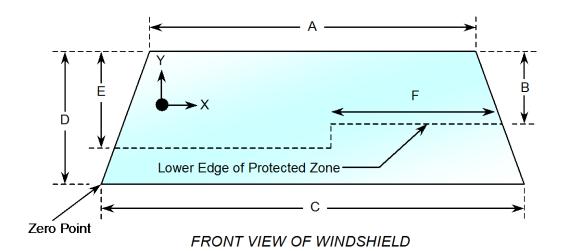
Test Technician: Ben Storey

IMPACT ANGLE:	0°							
BELTED DUMMIES (YES/NO):	NO							
TEST SPEED:	Χ	32 to 40 km	ph		0 to 48	kmph	0	to 56 kmph
DRIVER DUMMY:		X	,	5 <sup>th</sup> fe	male			50 <sup>th</sup> male
PASSENGER DUMMY:		X	,	5 <sup>th</sup> fe	male			50 <sup>th</sup> male

This standard specifies limits for the displacement of vehicle components into the windshield area during a frontal barrier impact test at any speed up to and including 48 kmph.

- 1. Place a 165 mm diameter rigid sphere, with a mass of 6.8 kg on the instrument panel so that it is simultaneously touching the instrument panel and the windshield. (571.219 S6.1(a))
- X 2. Roll the sphere from one side of the windshield to the other while marking on the windshield where the sphere contacts the windshield. (571.219 S6.1(b))
- X 3. From the outermost contactable points on the windshield draw a horizontal line to the edges of the windshield. (571.219 S6.1(b))
- X 4. Draw a line on the inner surface of the windshield that is 13 mm below the line determined in items 2 and 3.
- After the crash test, record any points where a part of the exterior of the vehicle has marked, penetrated, or broken the windshield.

Provide all dimensions necessary to reproduce the protected area.



#### WINDSHIELD DIMENSIONS

Item	Units	Value
Α	mm	1226
В	mm	499
С	mm	1432
D	mm	843
Е	mm	500
F	mm	560

#### AREA OF PROTECTED ZONE FAILURES:

B. Provide coordinates of the area that the protected zone was penetrated more than 0.25 inches by a vehicle component other than one which is normally in contact with the windshield.

X	Υ
NONE	

C. Provide coordinates of the area beneath the protected zone template that the inner surface of the windshield was penetrated by a vehicle component.

X	Υ
NONE	

#### **REMARKS**:

I certify that I have read and performed each instruction.

Signature: \_\_\_\_\_ Date: <u>8/31/15</u>

# DATA SHEET 43 FUEL SYSTEM INTEGRITY (FMVSS 301)

Test Vehicle: 2015 Mazda 3 NHTSA No.: C20155402
Test Program: FMVSS 208 Compliance Test Date: 8/31/15

Test Technician: Jordan Haynes

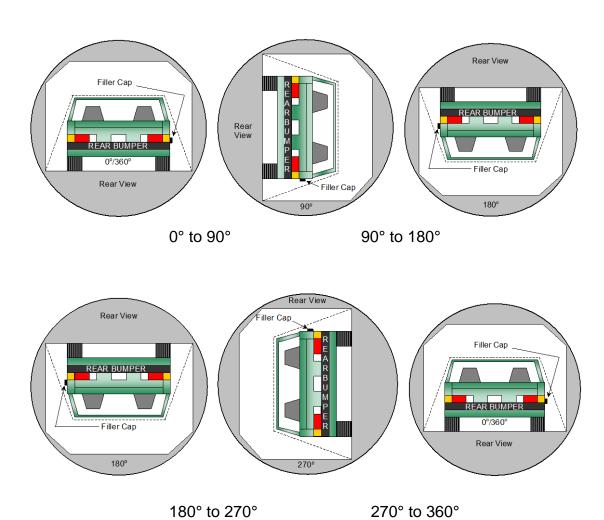
TYPE OF IMPACT:	25 mph Unbelted

## **Stoddard Solvent Spillage Measurements**

A.	From impact until vehicle motion ceases:	<u>0.0</u> _grams
	(Maximum Allowable = 28 grams)	
B.	For the 5 minute period after motion ceases:	0.0grams
	(Maximum Allowable = 142 grams)	
C.	For the following 25 minutes:	<u>0.0</u> grams
	(Maximum Allowable = 28 grams/minute)	
D.	Spillage: NONE	

**REMARKS: NO SPILLAGE** 

### **FMVSS 301 STATIC ROLLOVER DATA**



- 1. The specified fixture rollover rate for each 90° of rotation is 60 to 180 seconds.
- 2. The position hold time at each position is 300 seconds (minimum).
- 3. Details of Stoddard Solvent spillage locations: None

Test Phase	Rotation Time (sec.)	Hold Time (sec.)	Spillage (grams)
0° to 90°	120	300	0.0
90° to 180°	115	300	0.0
180° to 270°	111	300	0.0
270° to 360°	113	300	0.0

## **APPENDIX A**

## **CRASH TEST DATA**

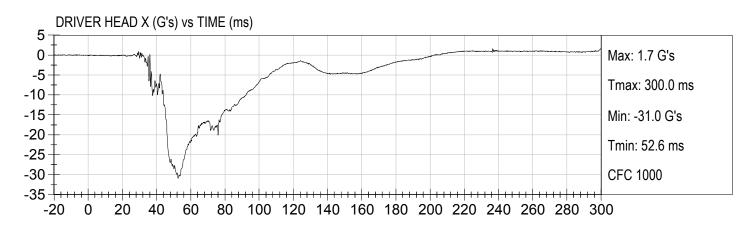
## **TABLE OF DATA PLOTS**

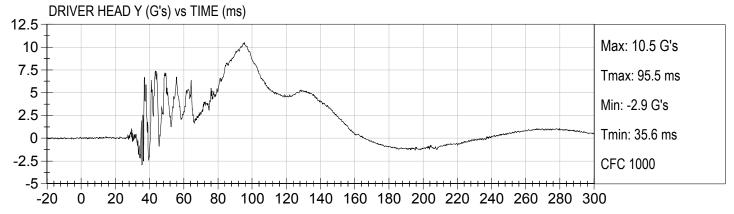
		<u>Page No.</u>
Figure No. 1.	Driver Head X Acceleration vs. Time	A-1
Figure No. 2.	Driver Head Y Acceleration vs. Time	A-1
Figure No. 3.	Driver Head Z Acceleration vs. Time	A-1
Figure No. 4.	Driver Head Resultant Acceleration vs. Time	A-1
Figure No. 5.	Driver Head X Velocity vs. Time	A-2
Figure No. 6.	Driver Head Y Velocity vs. Time	A-2
Figure No. 7.	Driver Head Z Velocity vs. Time	A-2
Figure No. 8.	Driver Neck Force X vs. Time	A-3
Figure No. 9.	Driver Neck Force Y vs. Time	A-3
Figure No. 10.	Driver Neck Force Z vs. Time	A-3
Figure No. 11.	Driver Neck Force Resultant vs. Time	A-3
Figure No. 12.	Driver Neck Moment X vs. Time	A-4
Figure No. 13.	Driver Neck Moment Y vs. Time	A-4
Figure No. 14.	Driver Neck Moment Z vs. Time	A-4
Figure No. 15.	Driver Neck Moment Resultant vs. Time	A-4
Figure No. 16.	Driver Chest X Acceleration vs. Time	A-5
Figure No. 17.	Driver Chest Y Acceleration vs. Time	A-5
Figure No. 18.	Driver Chest Z Acceleration vs. Time	A-5
Figure No. 19.	Driver Chest Resultant Acceleration vs. Time	A-5
Figure No. 20.	Driver Chest X Velocity vs. Time	A-6
Figure No. 21.	Driver Chest Y Velocity vs. Time	A-6
Figure No. 22.	Driver Chest Z Velocity vs. Time	A-6
Figure No. 23.	Driver Chest Displacement vs. Time	A-6
Figure No. 24.	Driver Left Femur Force vs. Time	A-7
Figure No. 25.	Driver Right Femur Force vs. Time	A-7
Figure No. 26.	Passenger Head X Acceleration vs. Time	A-8
Figure No. 27.	Passenger Head Y Acceleration vs. Time	A-8
Figure No. 28.	Passenger Head Z Acceleration vs. Time	A-8
Figure No. 29.	Passenger Head Resultant Acceleration vs. Time	A-8
Figure No. 30.	Passenger Head X Velocity vs. Time	A-9

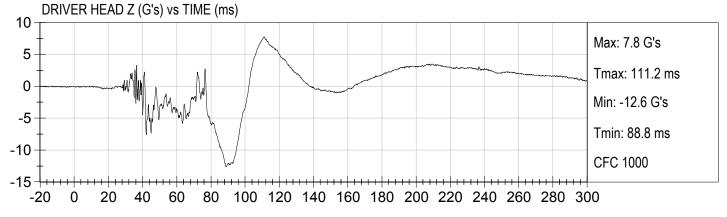
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Figure No. 31.	Passenger Head Y Velocity vs. Time	A-9
Figure No. 32.	Passenger Head Z Velocity vs. Time	A-9
Figure No. 33.	Passenger Neck Force X vs. Time	A-10
Figure No. 34.	Passenger Neck Force Y vs. Time	A-10
Figure No. 35.	Passenger Neck Force Z vs. Time	A-10
Figure No. 36.	Passenger Neck Force Resultant vs. Time	A-10
Figure No. 37.	Passenger Neck Moment X vs. Time	A-11
Figure No. 38.	Passenger Neck Moment Y vs. Time	A-11
Figure No. 39.	Passenger Neck Moment Z vs. Time	A-11
Figure No. 40.	Passenger Neck Moment Resultant vs. Time	A-11
Figure No. 41.	Passenger Chest X Acceleration vs. Time	A-12
Figure No. 42.	Passenger Chest Y Acceleration vs. Time	A-12
Figure No. 43.	Passenger Chest Z Acceleration vs. Time	A-12
Figure No. 44.	Passenger Chest Resultant Acceleration vs. Time	A-12
Figure No. 45.	Passenger Chest X Velocity vs. Time	A-13
Figure No. 46.	Passenger Chest Y Velocity vs. Time	A-13
Figure No. 47.	Passenger Chest Z Velocity vs. Time	A-13
Figure No. 48.	Passenger Chest Displacement vs. Time	A-13
Figure No. 49.	Passenger Left Femur Force vs. Time	A-14
Figure No. 50.	Passenger Right Femur Force vs. Time	A-14
Figure No. 51.	Driver Nij (N <sub>TF</sub> ) vs. Time	A-15
Figure No. 52.	Driver Nij (N <sub>TE</sub> ) vs. Time	A-15
Figure No. 53.	Driver Nij (N <sub>CF</sub> ) vs. Time	A-15
Figure No. 54.	Driver Nij (N <sub>CE</sub> ) vs. Time	A-15
Figure No. 55.	Passenger Nij (N <sub>TF</sub> ) vs. Time	A-16
Figure No. 56.	Passenger Nij (N <sub>TE</sub> ) vs. Time	A-16
Figure No. 57.	Passenger Nij (N <sub>CF</sub> ) vs. Time	A-16
Figure No. 58.	Passenger Nij (N <sub>CE</sub> ) vs. Time	A-16
Figure No. 59.	Driver Occipital Condyle Moment vs. Time	A-17
Figure No. 60.	Passenger Occipital Condyle Moment vs. Time	A-17
Figure No. 61.	Left Rear Seat Crossmember X Acceleration vs. Time	A-18
Figure No. 62.	Left Rear Seat Crossmember X Velocity vs. Time	A-18
Figure No. 63.	Right Rear Seat Crossmember X Acceleration vs. Time	A-18
Figure No. 64.	Right Rear Seat Crossmember X Velocity vs. Time	A-18
Figure No. 65.	Top of Engine X Acceleration vs. Time	A-19

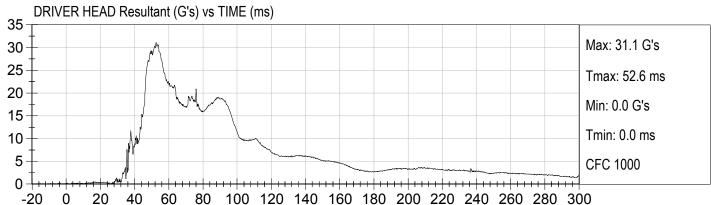
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Figure No. 66.	Top of Engine X Velocity vs. Time	A-19
Figure No. 67.	Bottom of Engine X Acceleration vs. Time	A-19
Figure No. 68.	Bottom of Engine X Velocity vs. Time	A-19
Figure No. 69.	Left Brake Caliper X Acceleration vs. Time	A-20
Figure No. 70.	Left Brake Caliper X Velocity vs. Time	A-20
Figure No. 71.	Right Brake Caliper X Acceleration vs. Time	A-20
Figure No. 72.	Right Brake Caliper X Velocity vs. Time	A-20
Figure No. 73.	Instrument Panel X Acceleration vs. Time	A-21
Figure No. 74.	Instrument Panel X Velocity vs. Time	A-21
Figure No. 75.	Trunk Z Acceleration vs. Time	A-21
Figure No. 76.	Trunk Z Velocity vs. Time	A-21

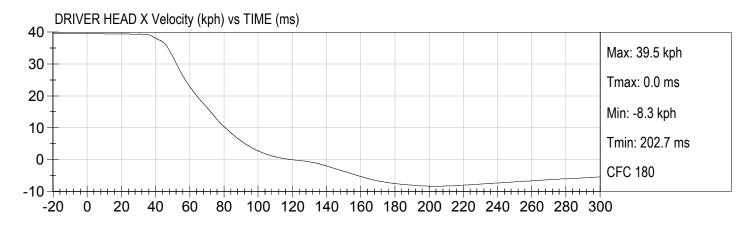
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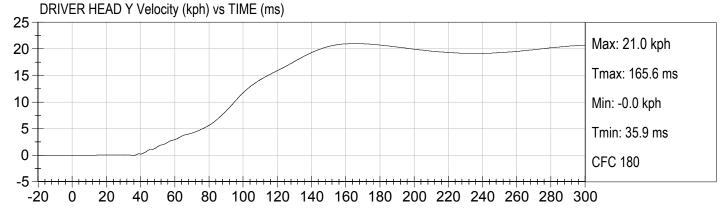


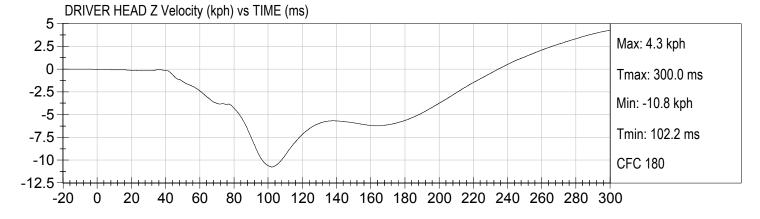


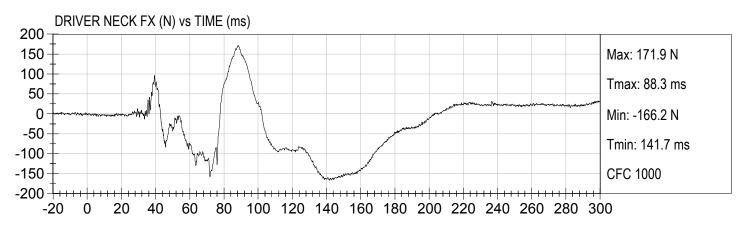


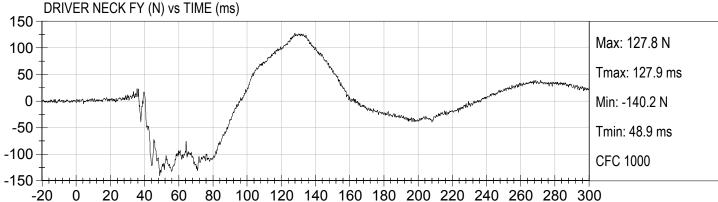


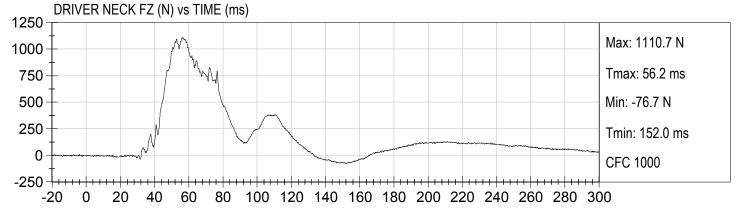


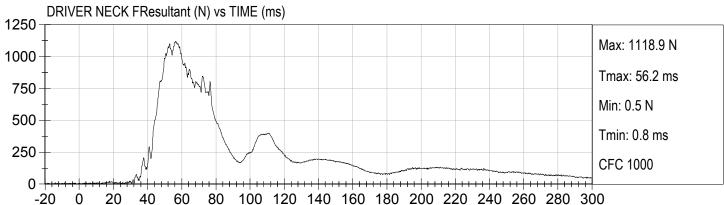


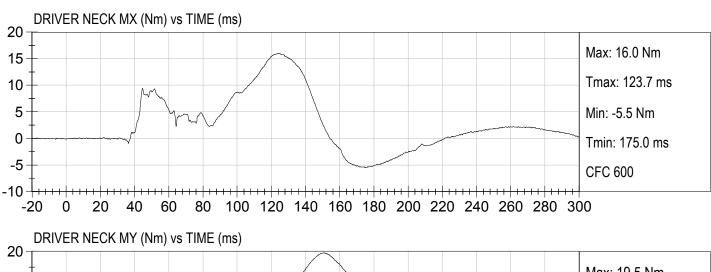


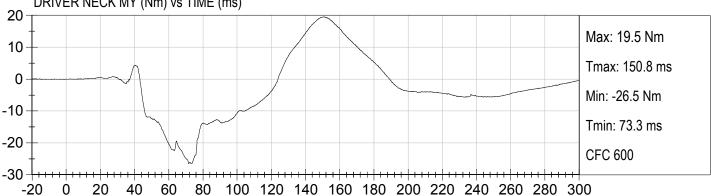


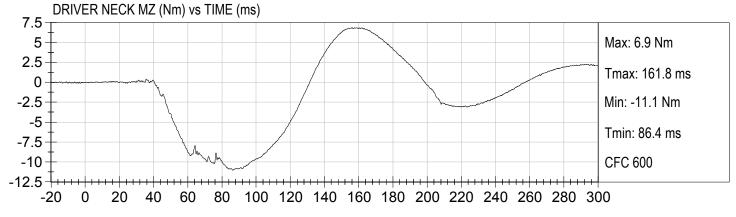


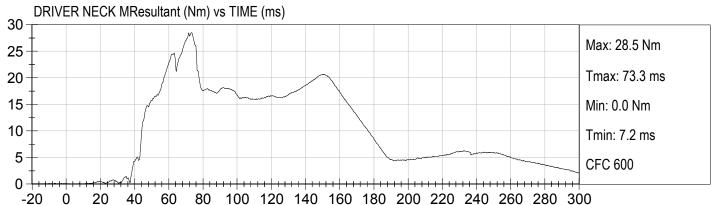












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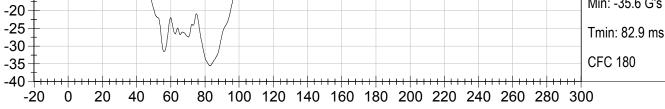
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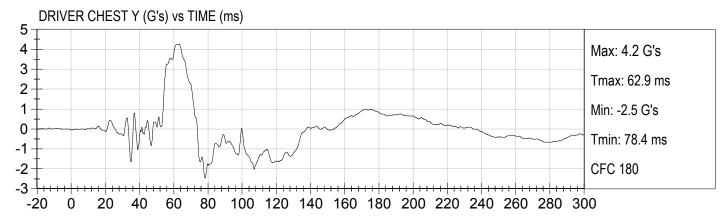
DRIVER CHEST X (G's) vs TIME (ms)

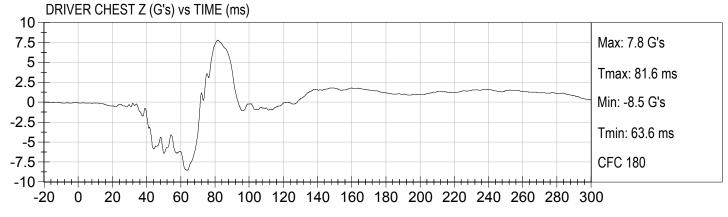
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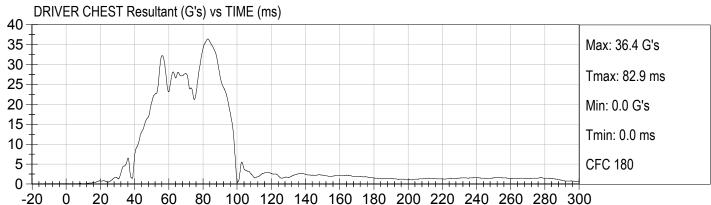
Tmax: 116.4 ms

Min: -35.6 G's

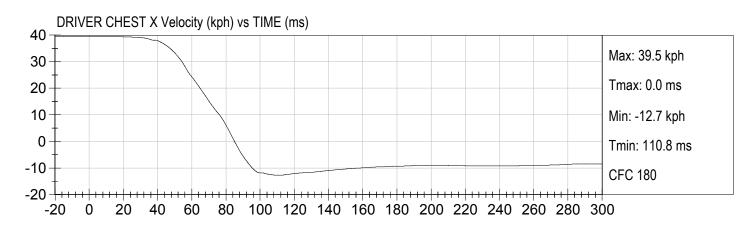


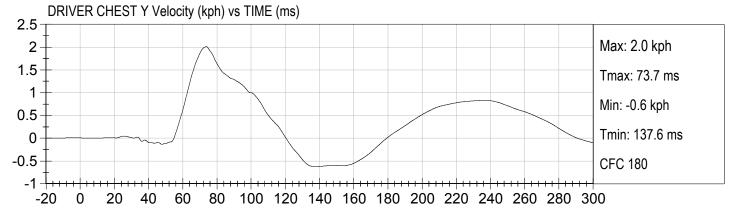


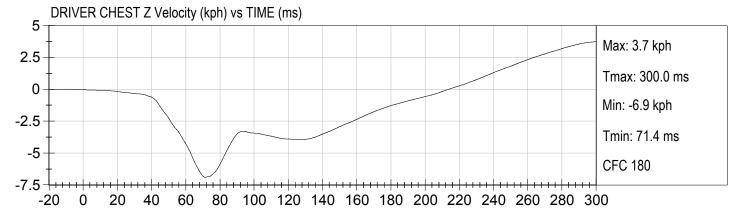


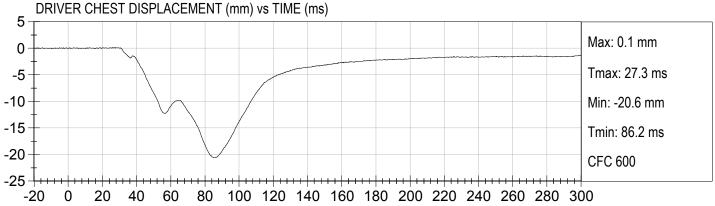


Test Date: 08/31/2015 Speed: 24.6 mph (39.5 km/h)









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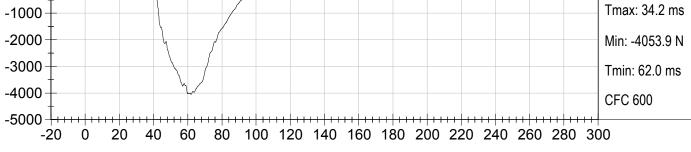
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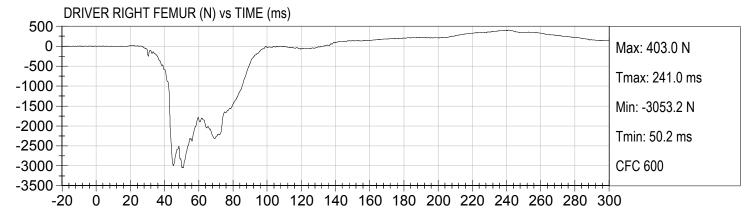
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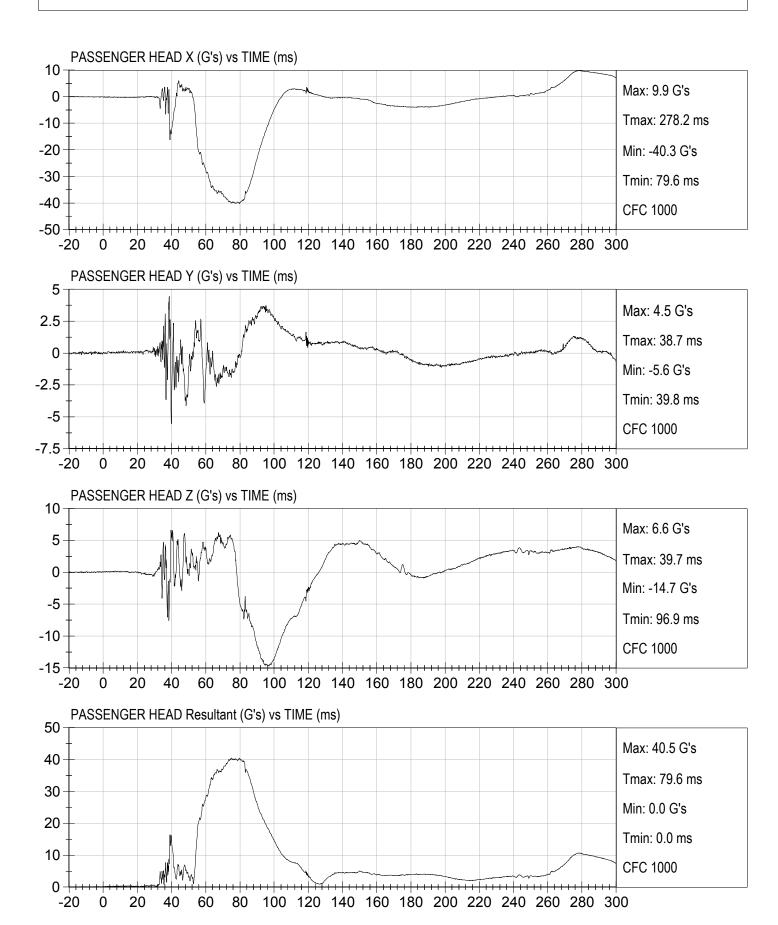
DRIVER LEFT FEMUR (N) vs TIME (ms)

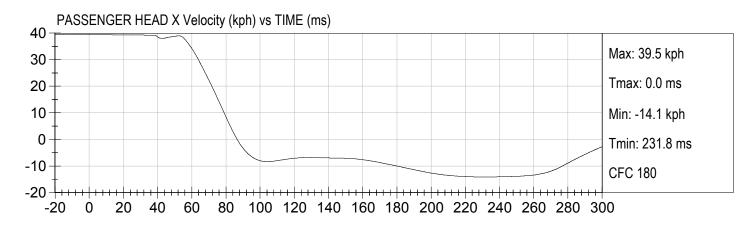
Max: 90.7 N

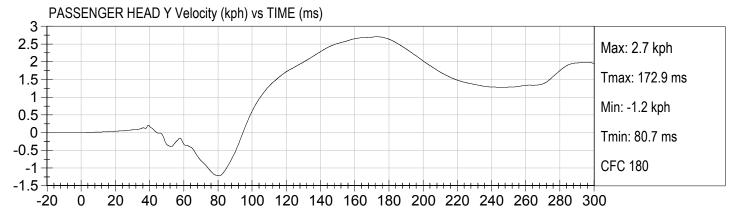
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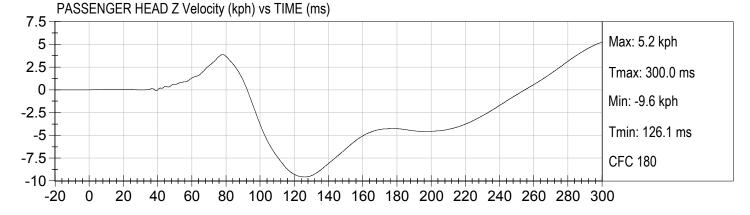


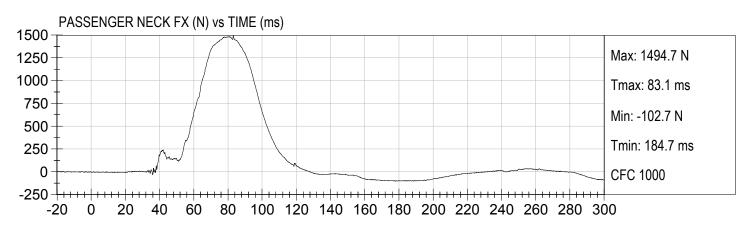


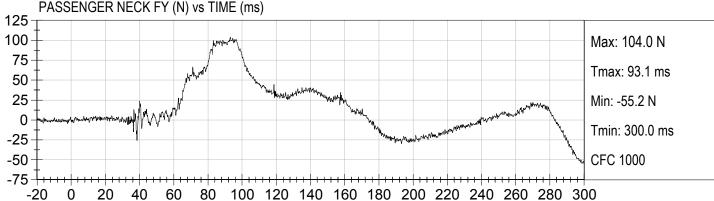


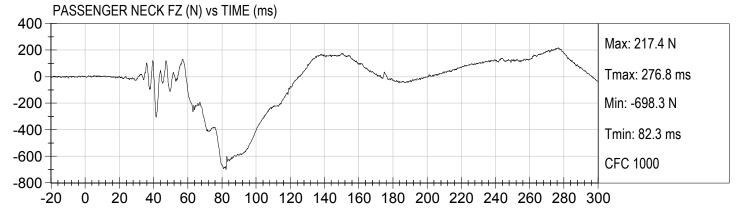


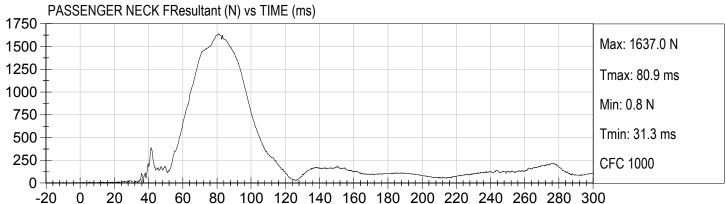




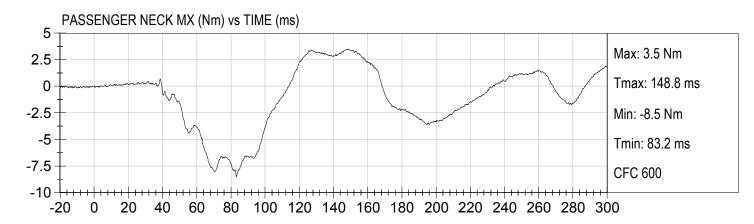


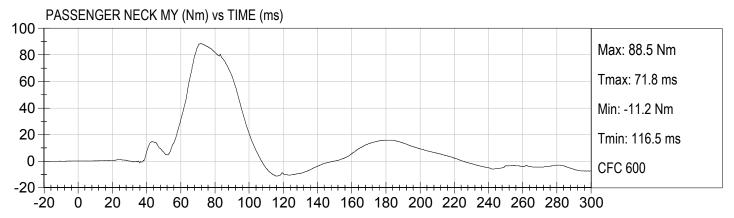


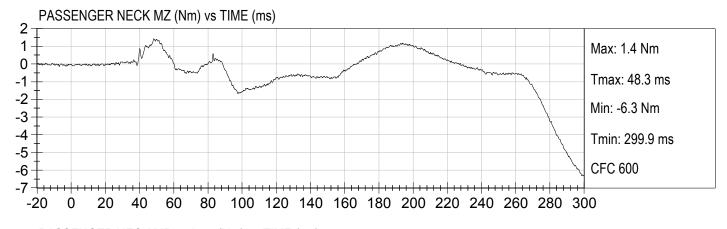


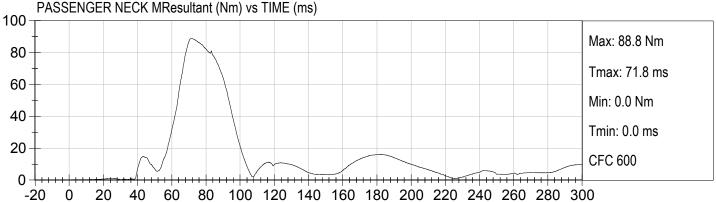


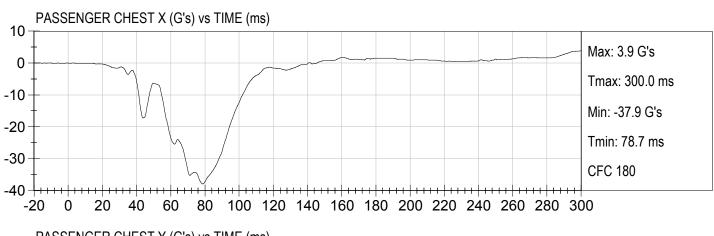
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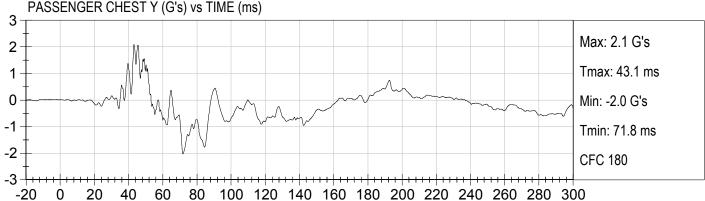


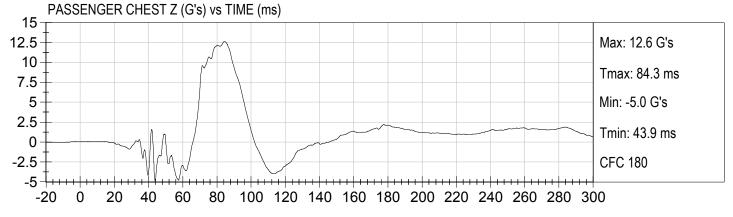


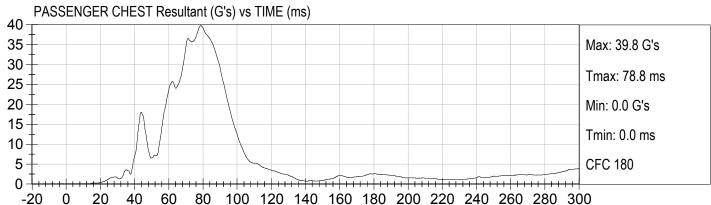


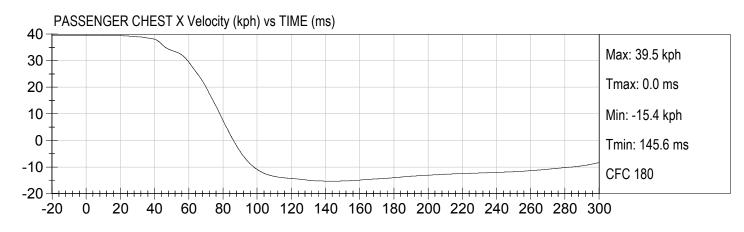


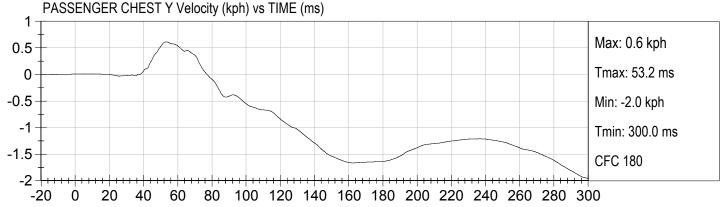


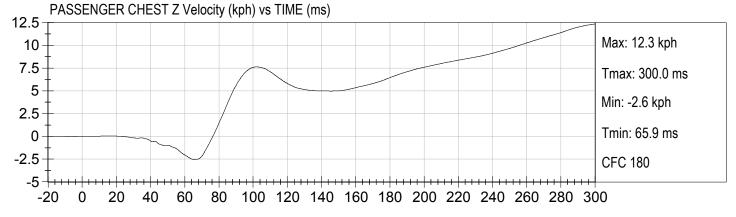


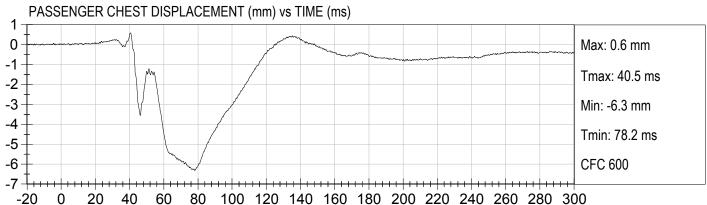


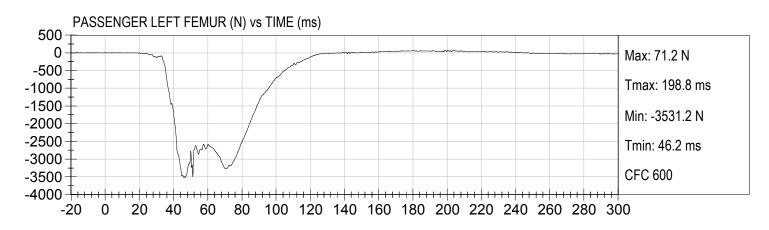


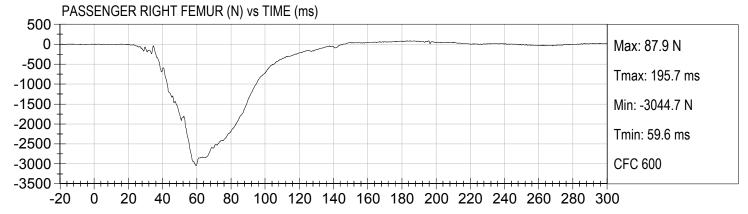


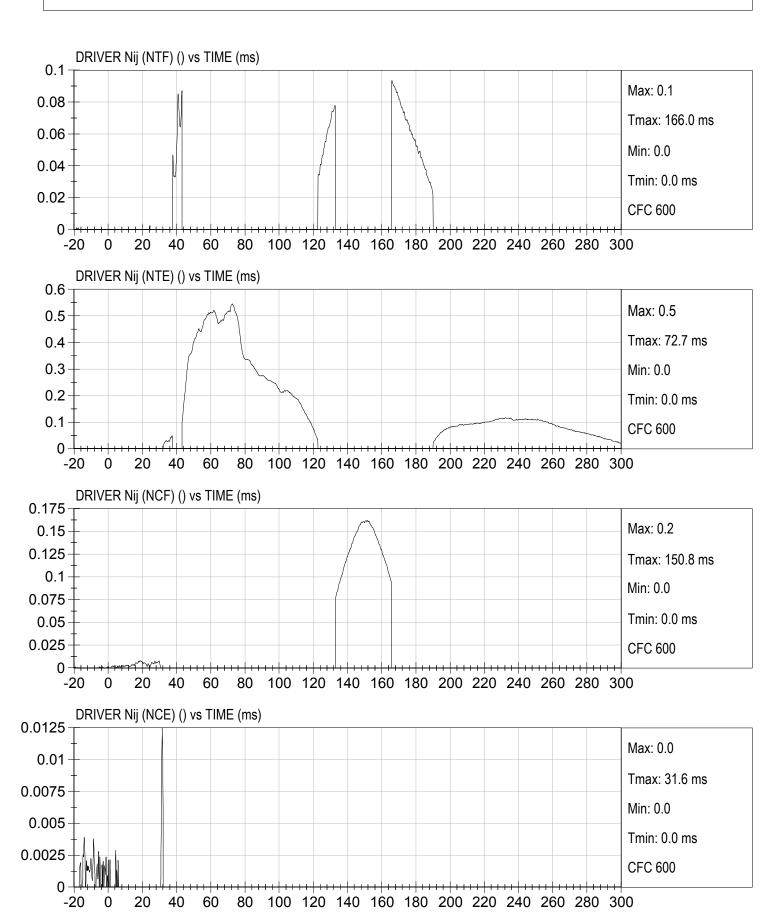


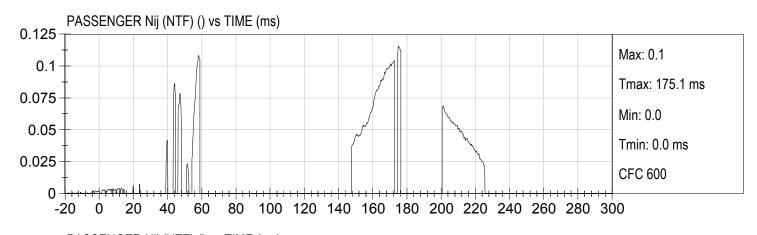


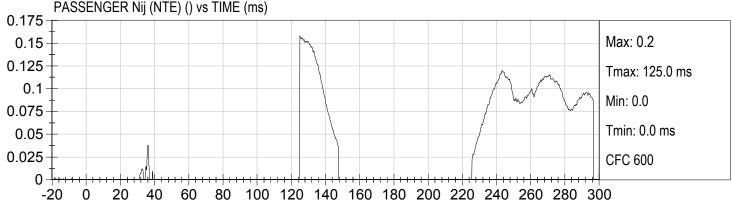


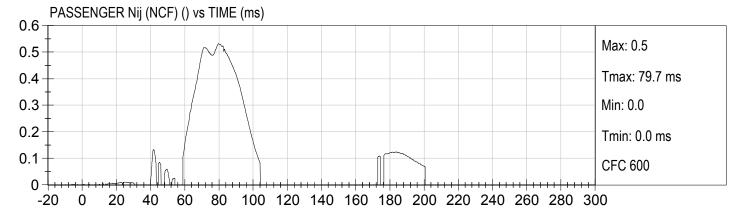


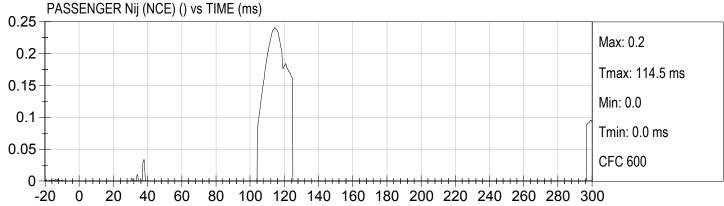


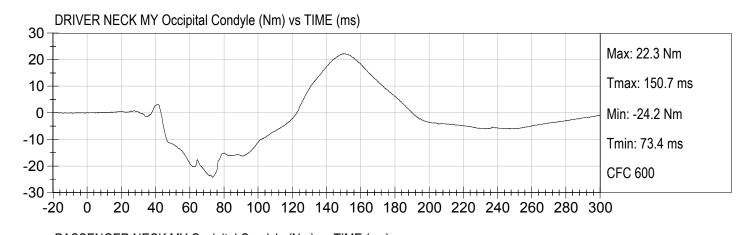


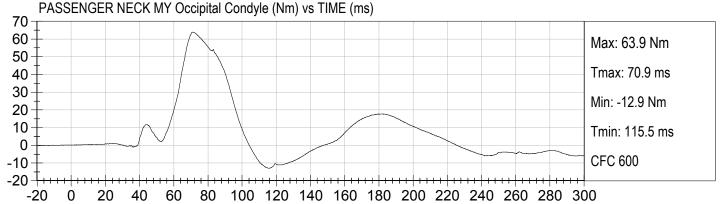


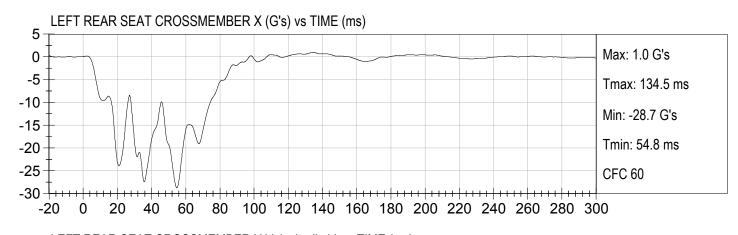


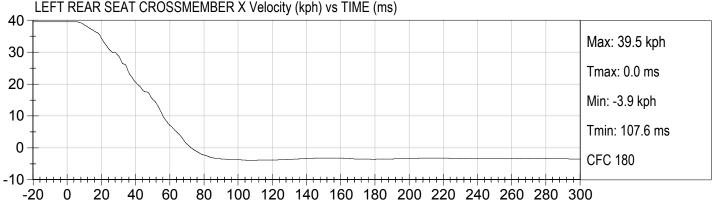


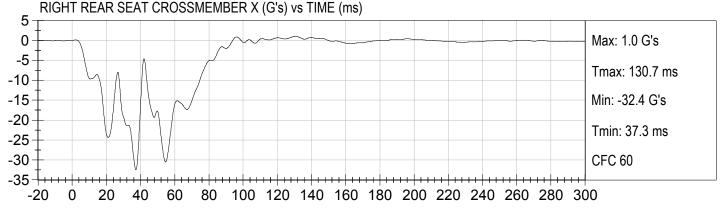


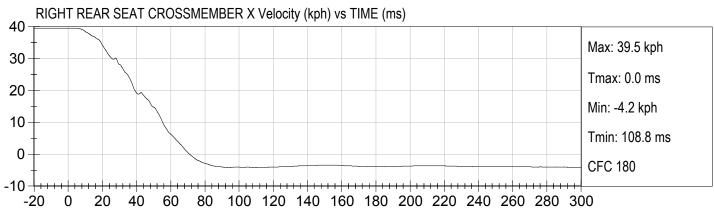




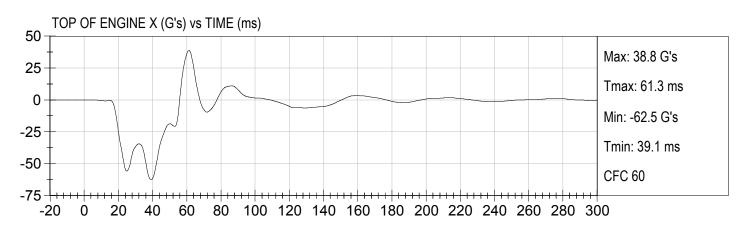


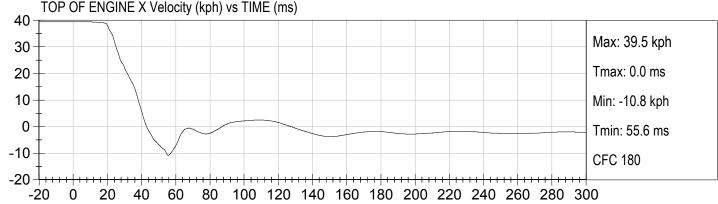


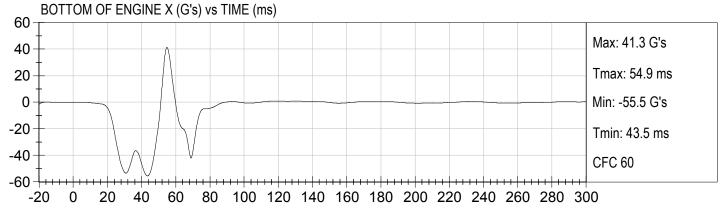


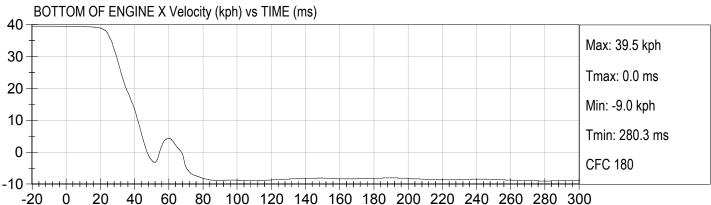


Test Date: 08/31/2015 Speed: 24.6 mph (39.5 km/h)

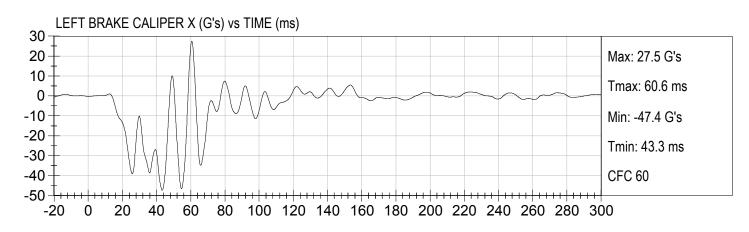


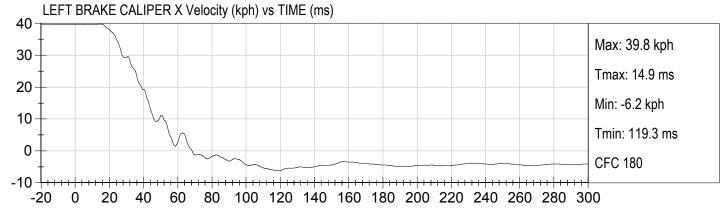


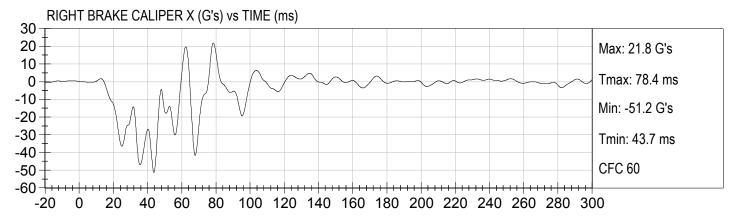


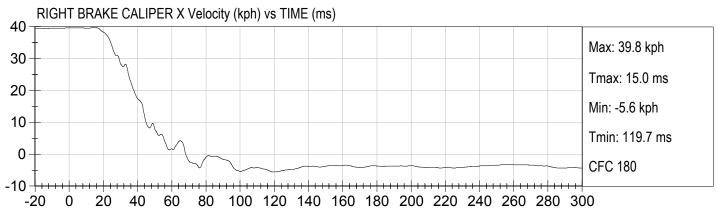


Test Date: 08/31/2015 Speed: 24.6 mph (39.5 km/h)

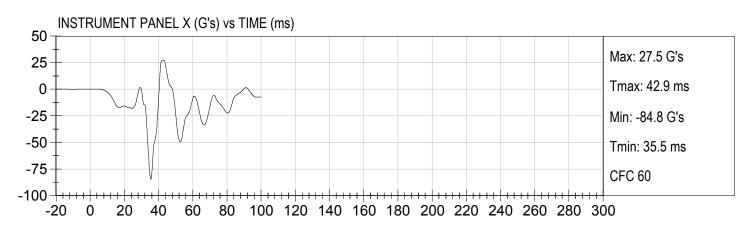


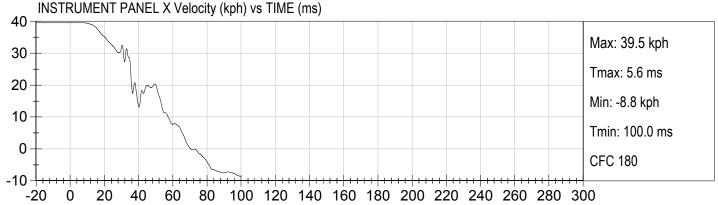


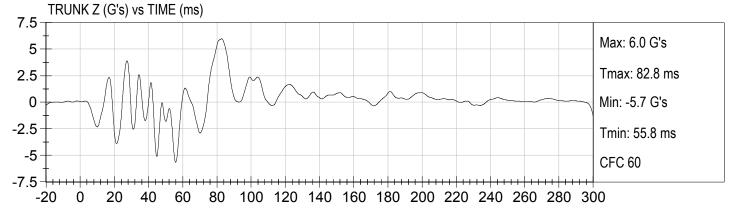


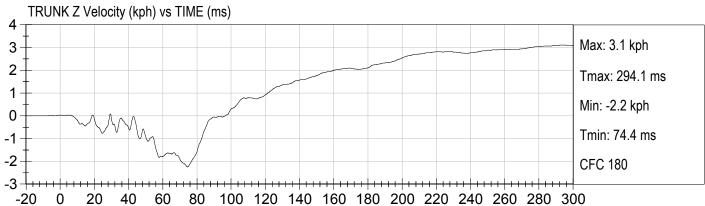


Test Date: 08/31/2015 Speed: 24.6 mph (39.5 km/h)









### **APPENDIX B**

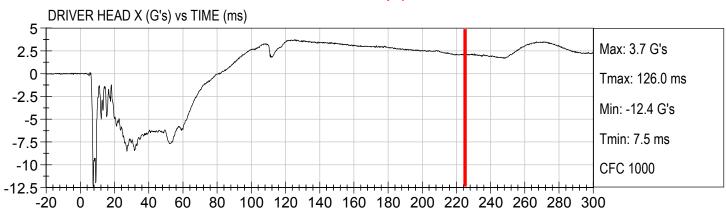
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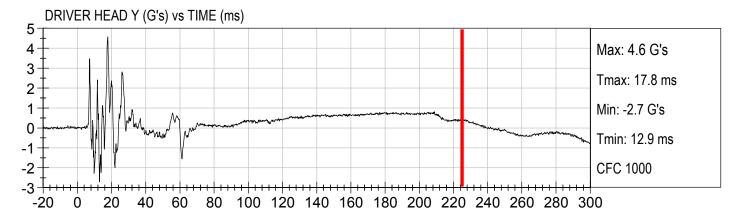
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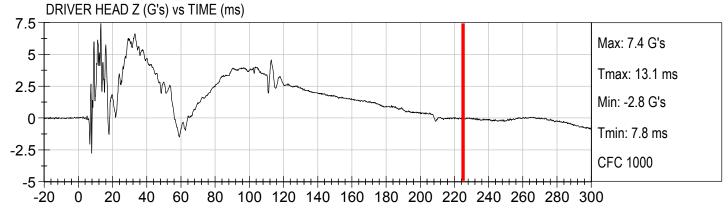
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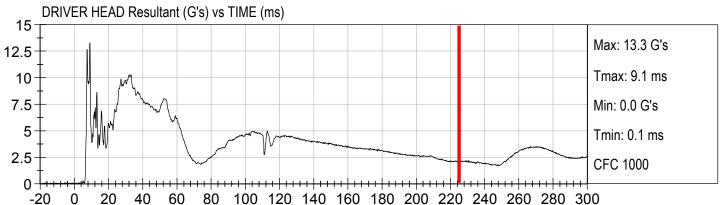
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Test Date: 08/03/2015

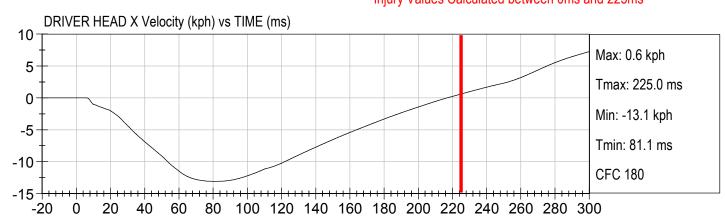


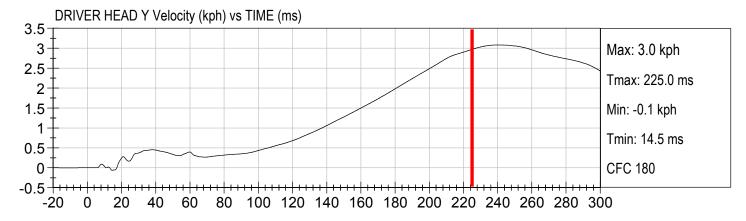


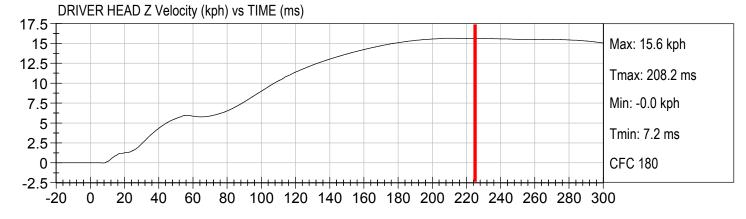




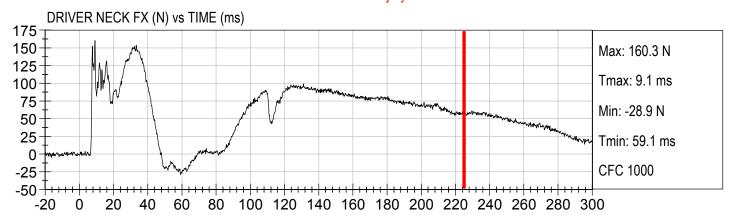
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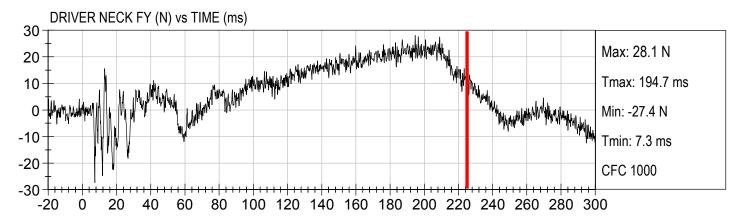


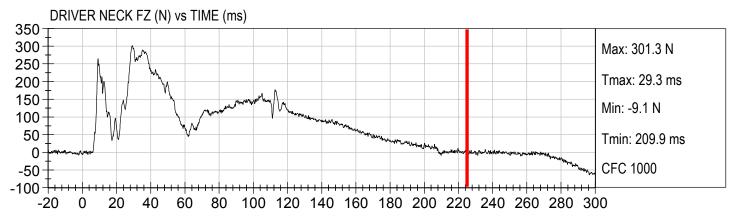


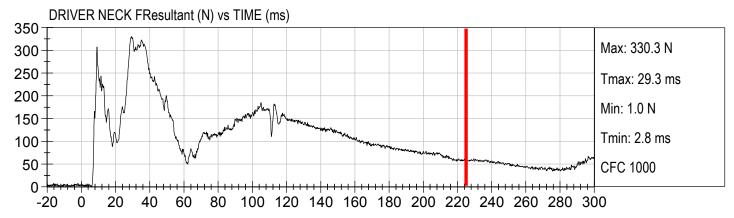


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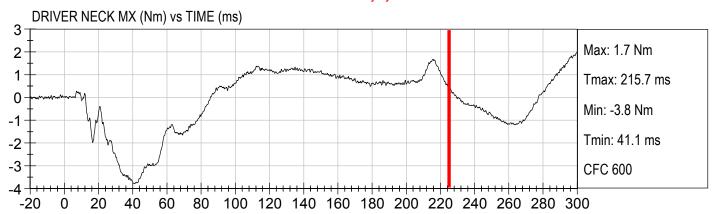


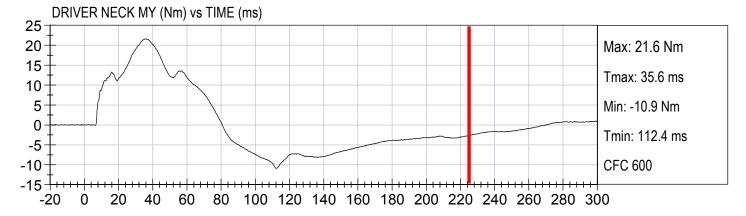


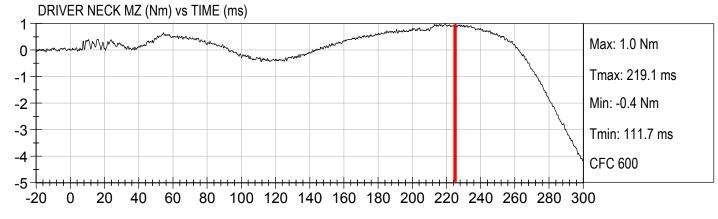


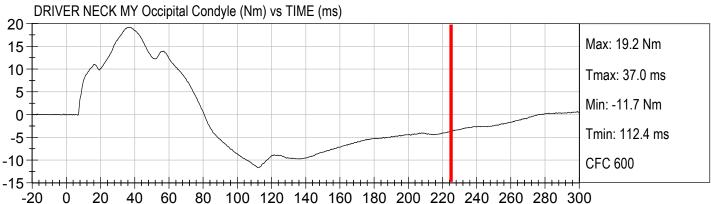


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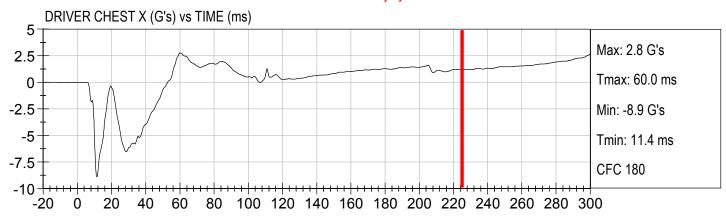


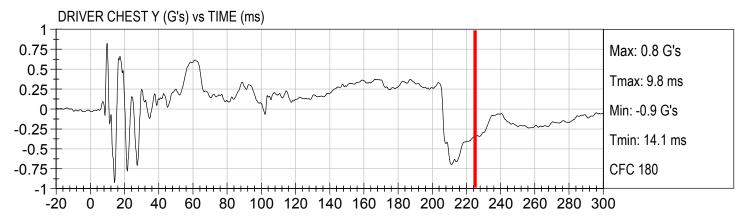


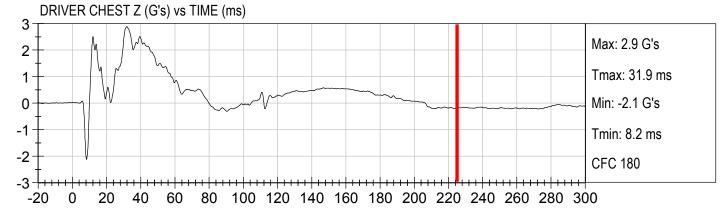


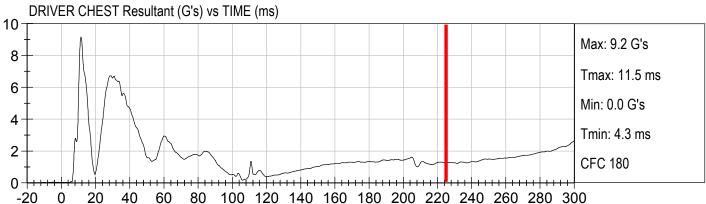


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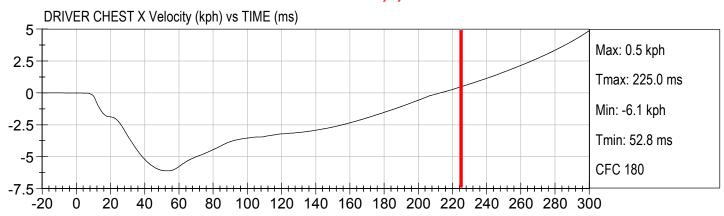


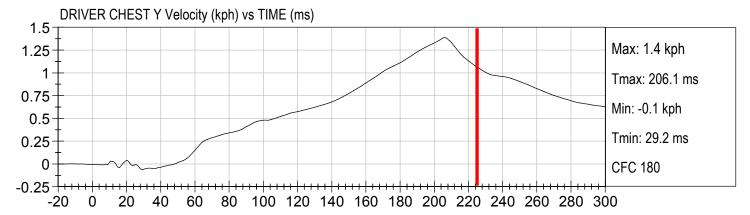


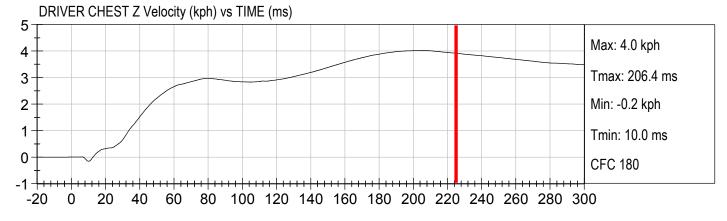


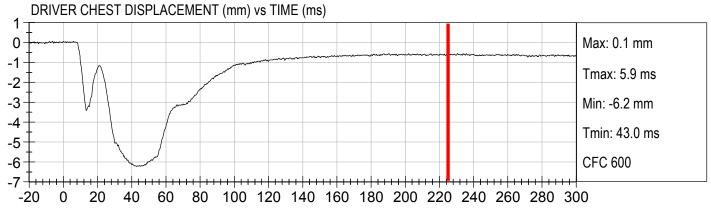


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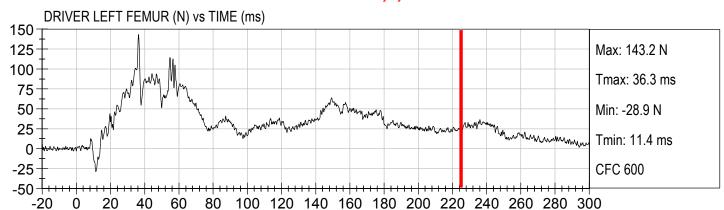


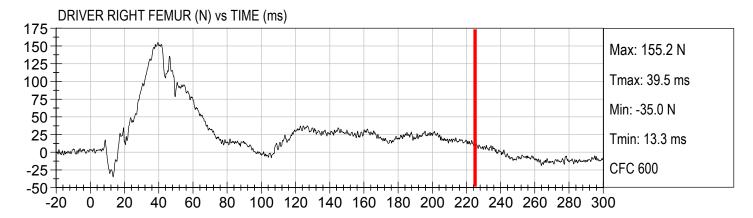




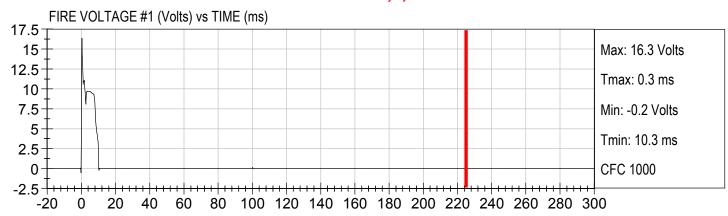


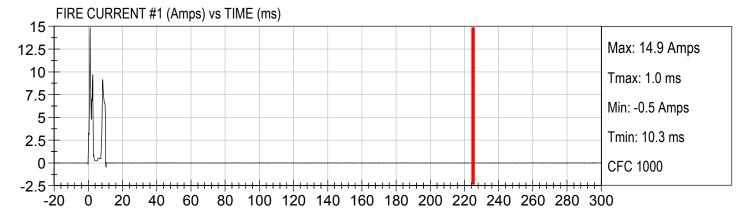
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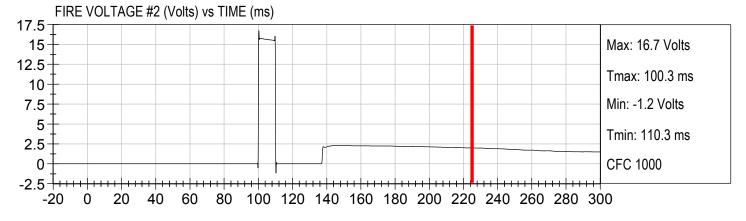


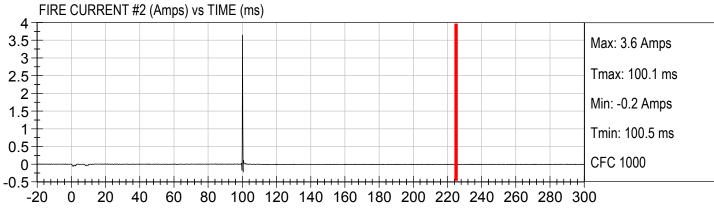


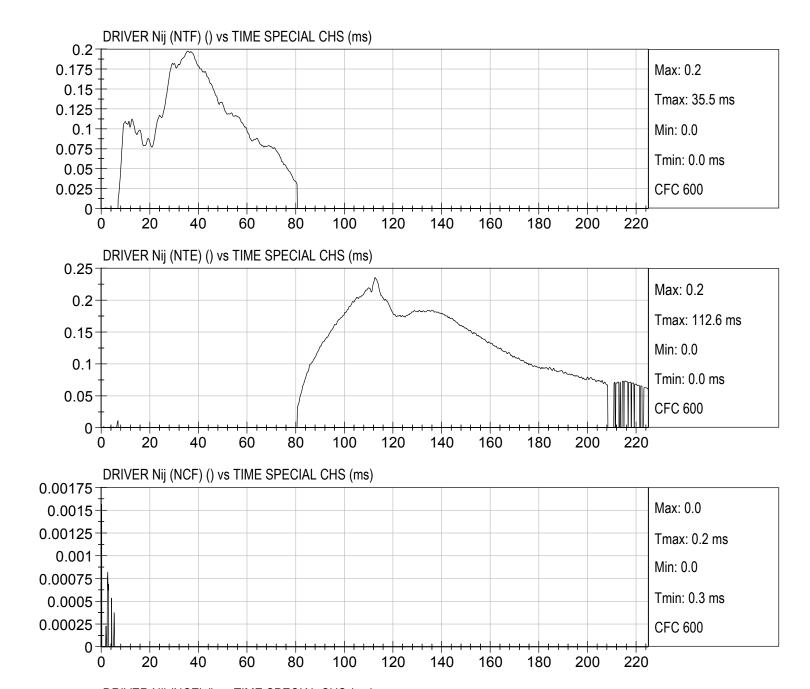
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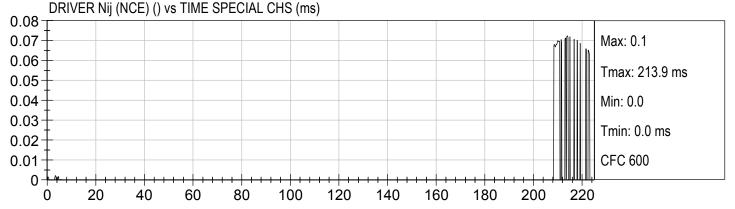




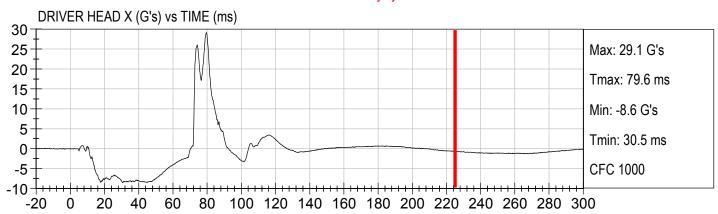


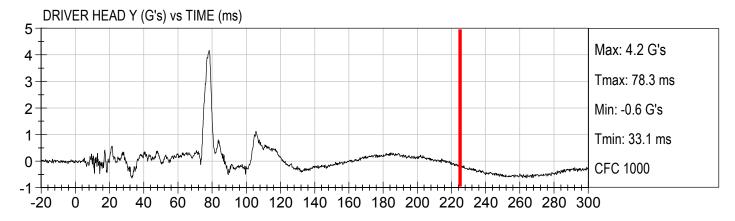


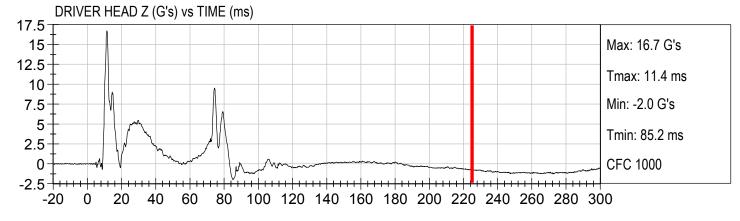


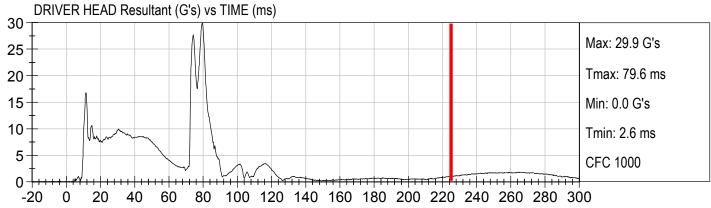


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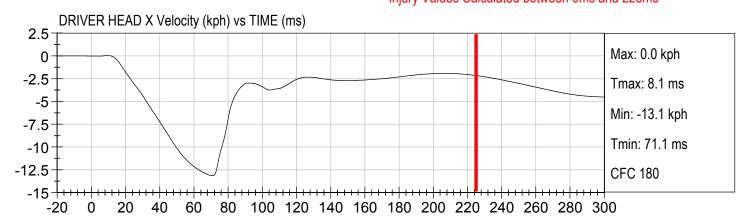


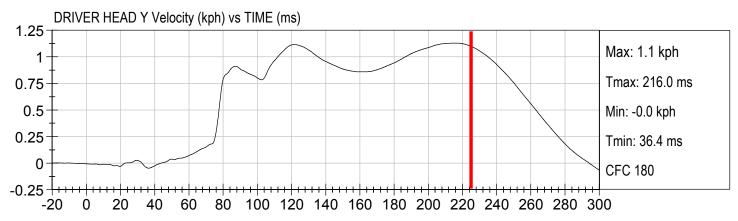


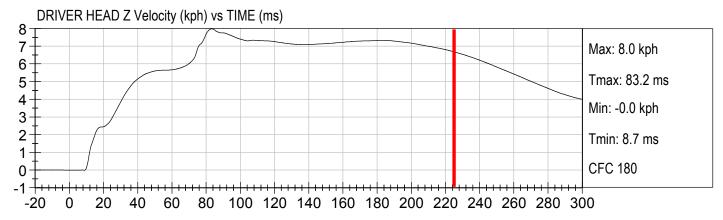




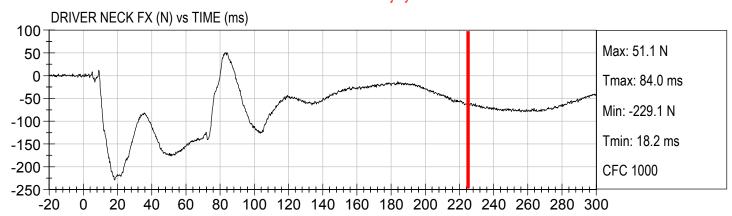
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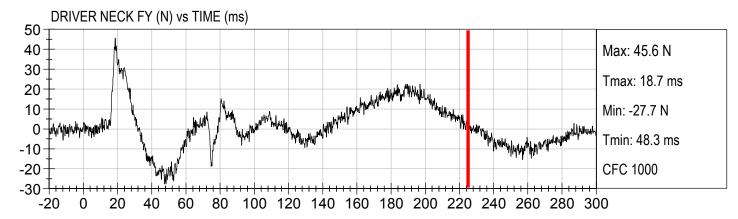


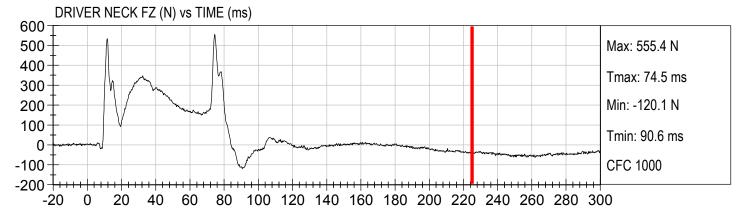


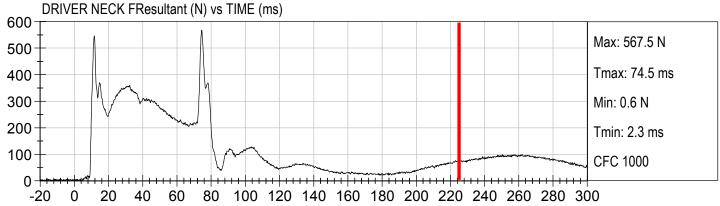


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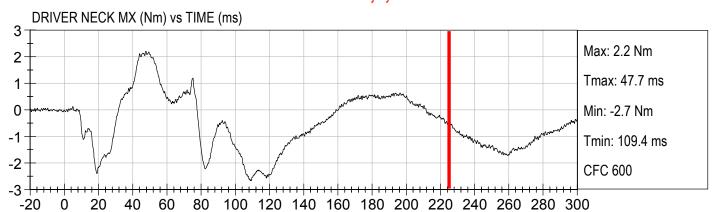


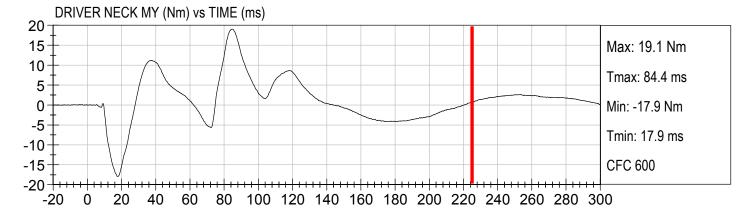


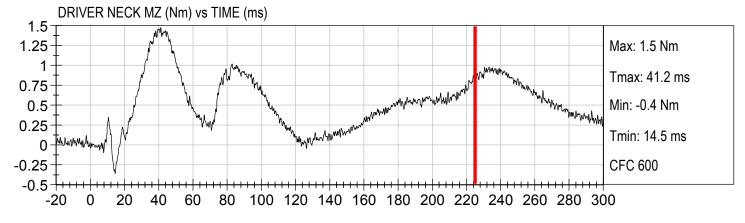


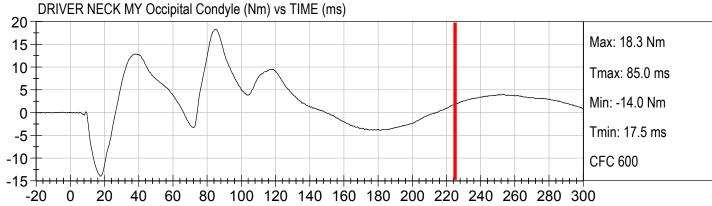


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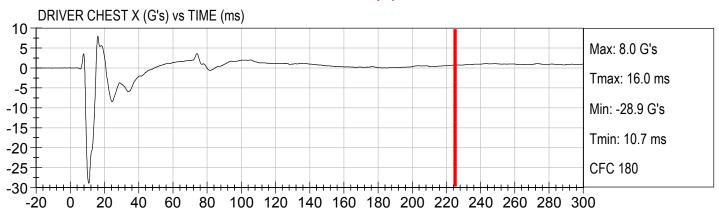


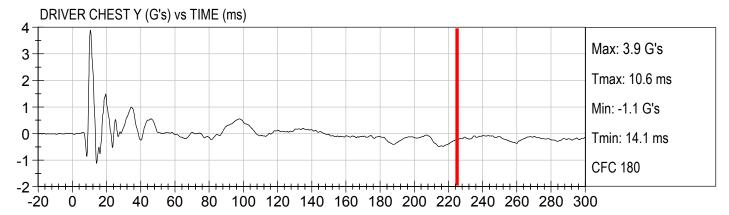


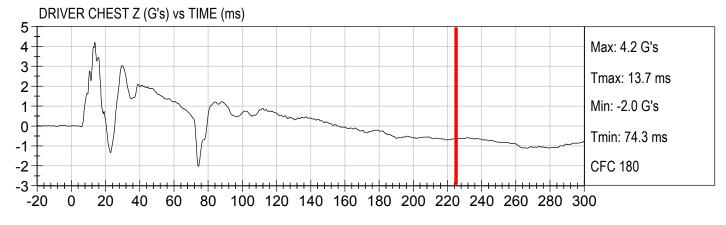


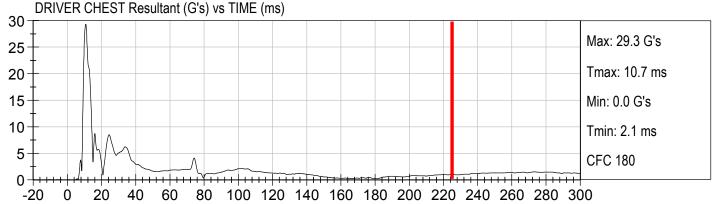


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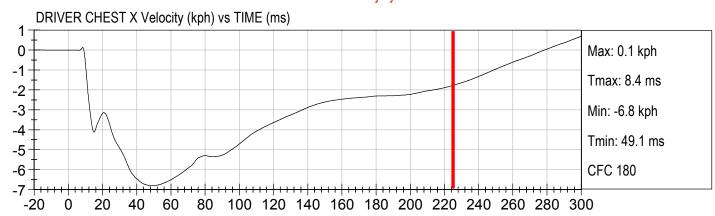


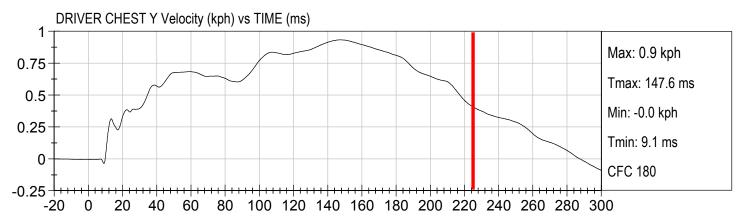


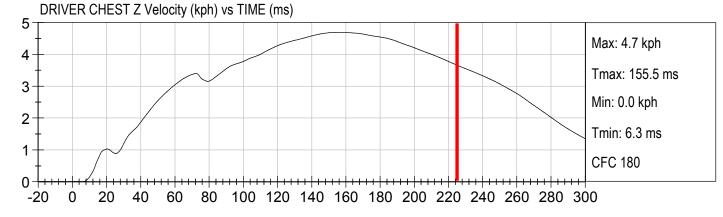


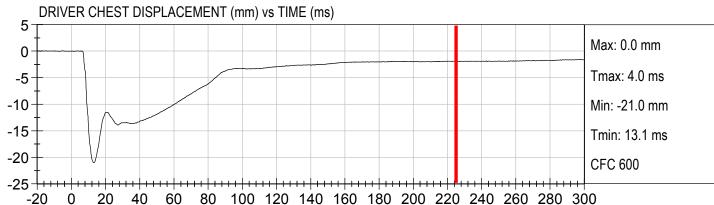


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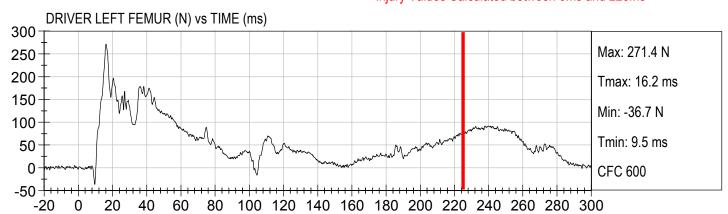


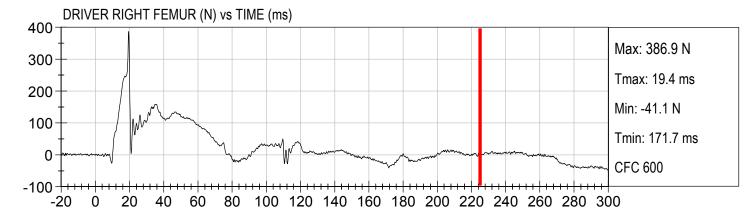




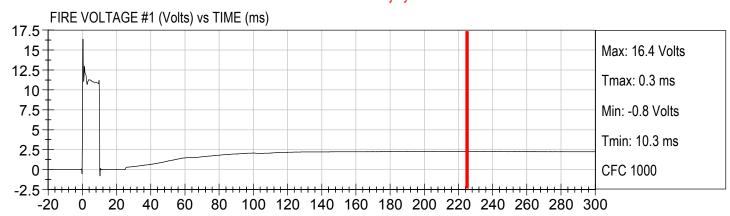


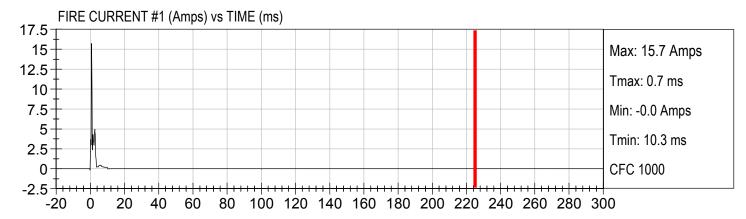
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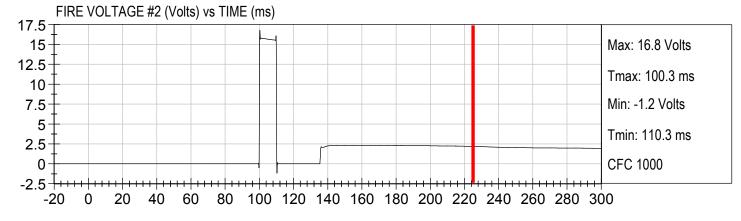


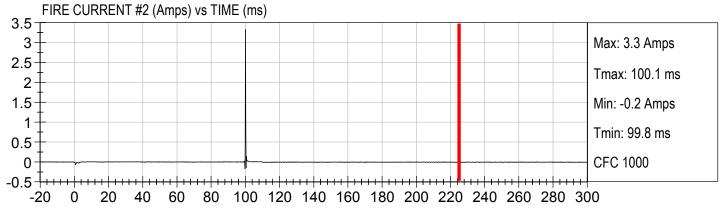


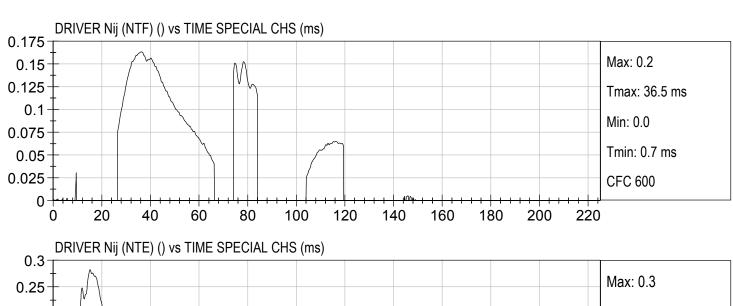
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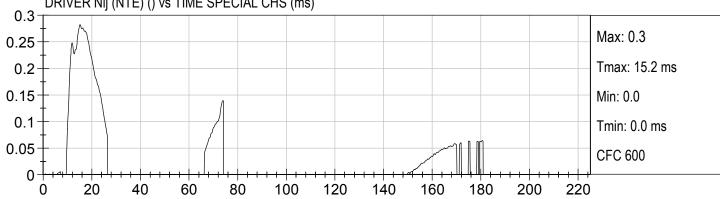


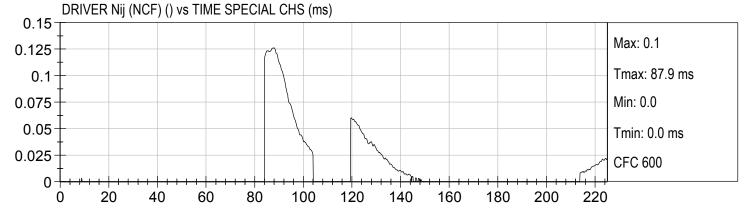


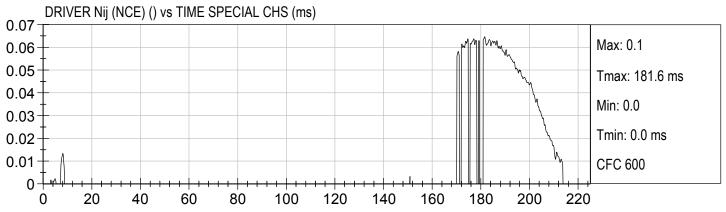












#### **APPENDIX C**

# **CRASH TEST PHOTOGRAPHS**

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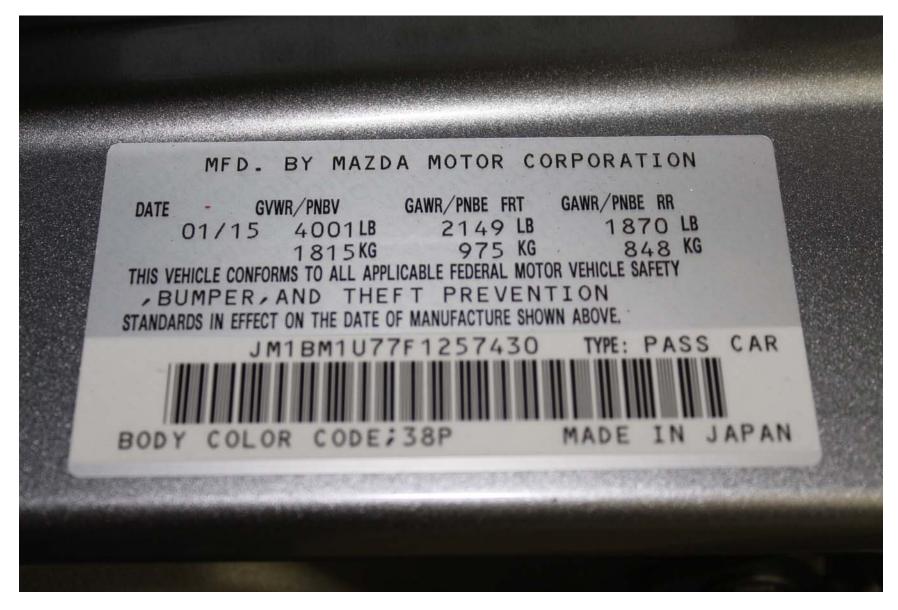


Photo No. 1 - Vehicle Certification Label



Photo No. 2 - Tire Placard

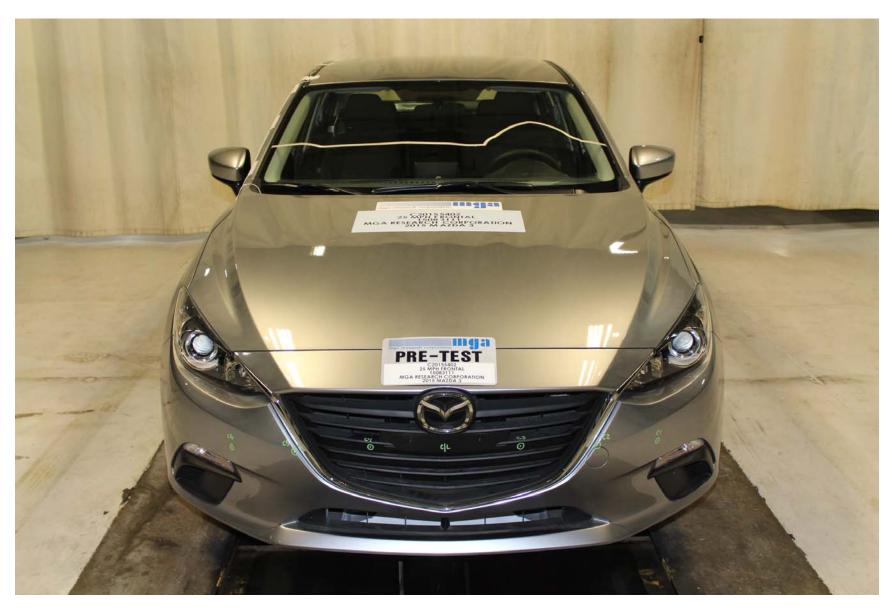


Photo No. 3 - Pre-Test Front View of Test Vehicle

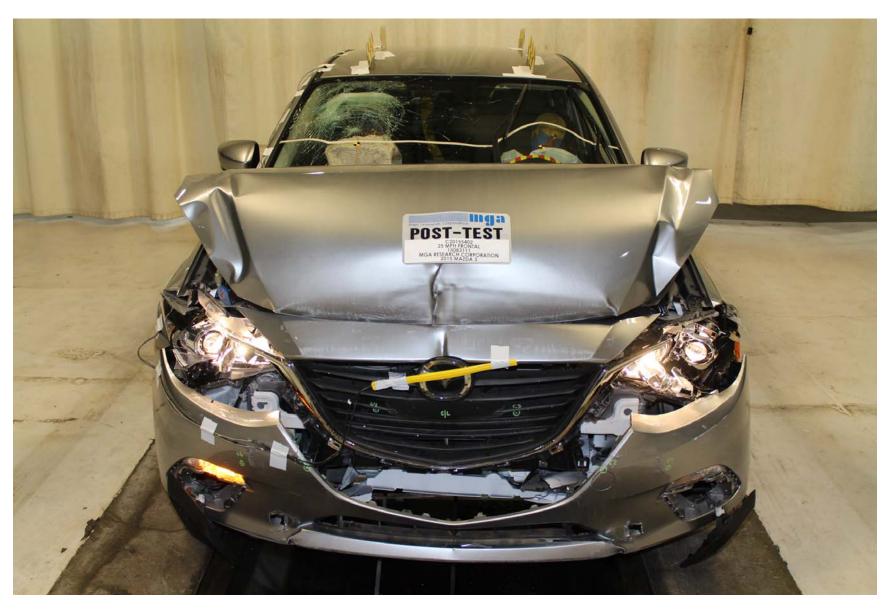


Photo No. 4 - Post-Test Front View of Test Vehicle



Photo No. 5 - Pre-Test Left Side View of Test Vehicle



Photo No. 6 - Post-Test Left Side View of Test Vehicle

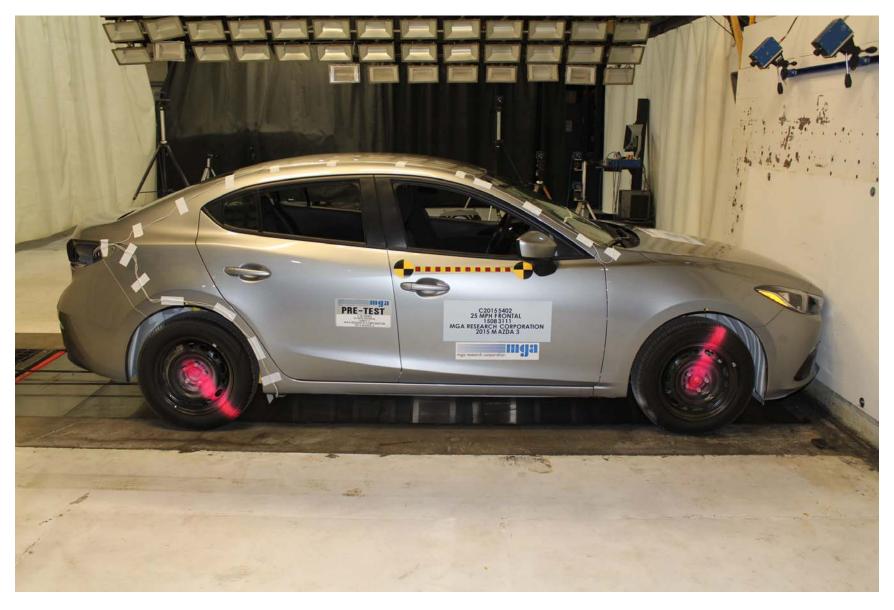


Photo No. 7 - Pre-Test Right Side View of Test Vehicle



Photo No. 8 - Post-Test Right Side View of Test Vehicle



Photo No. 9 - Pre-Test Left Front Three-Quarter View of Test Vehicle

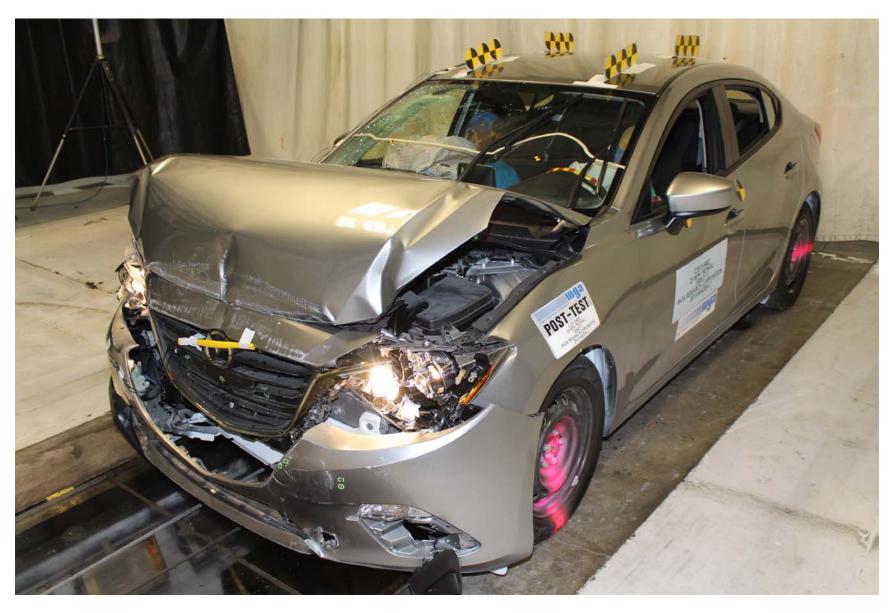


Photo No. 10 - Post-Test Left Front Three-Quarter View of Test Vehicle



Photo No. 11 - Pre-Test Right Front Three-Quarter View of Test Vehicle

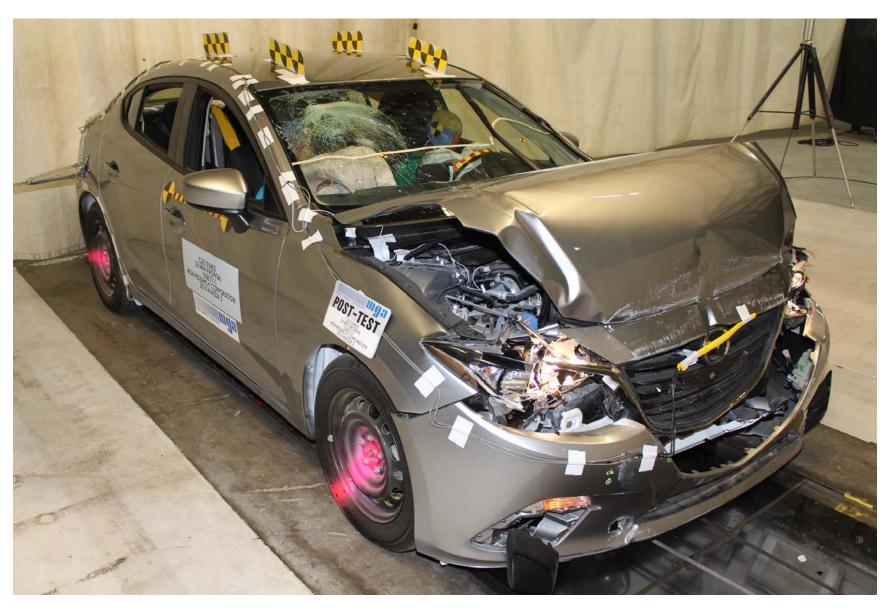


Photo No. 12 - Post-Test Right Front Three-Quarter View of Test Vehicle



Photo No. 13 - Pre-Test Right Rear Three-Quarter View of Test Vehicle



Photo No. 14 - Post-Test Right Rear Three-Quarter View of Test Vehicle

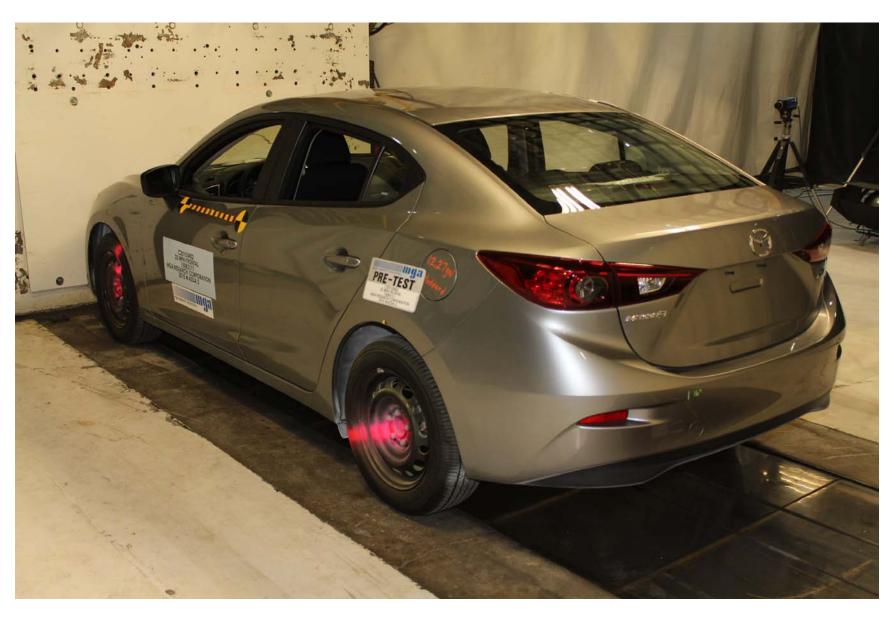


Photo No. 15 - Pre-Test Left Rear Three-Quarter View of Test Vehicle



Photo No. 16 - Post-Test Left Rear Three-Quarter View of Test Vehicle

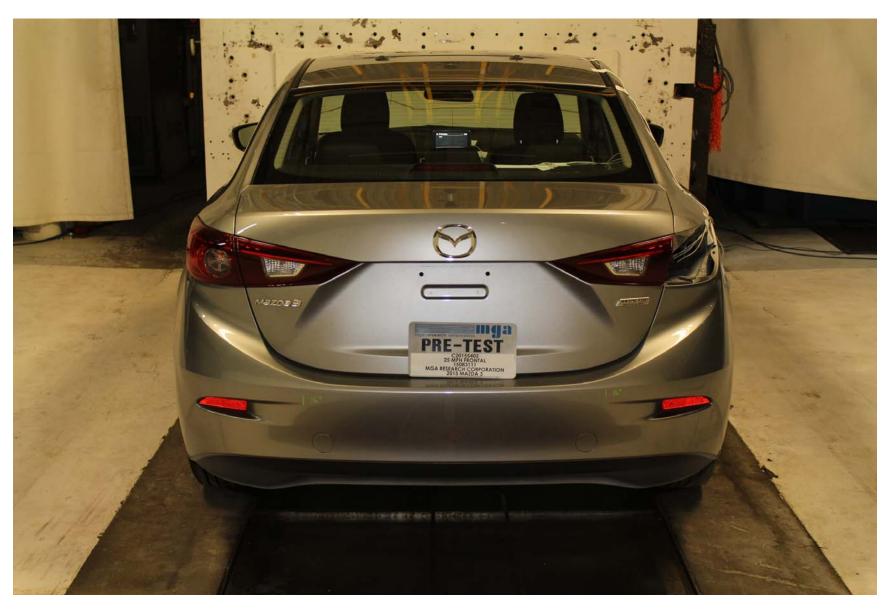


Photo No. 17 - Pre-Test Rear View of Test Vehicle



Photo No. 18 - Post-Test Rear View of Test Vehicle

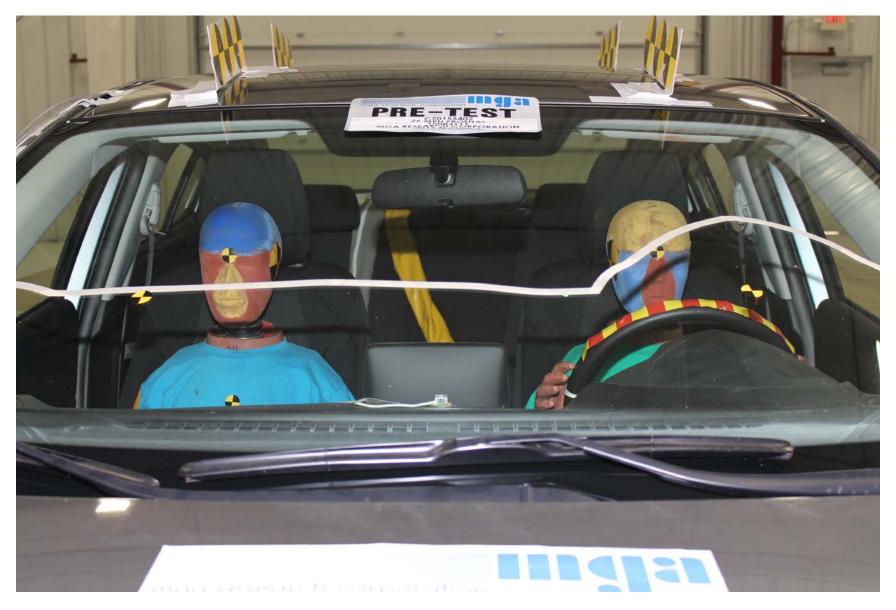


Photo No. 19 - Pre-Test Windshield View



Photo No. 20 - Post-Test Windshield View



Photo No. 21 - Pre-Test Engine Compartment View



Photo No. 22 - Post-Test Engine Compartment View



Photo No. 23 - Pre-Test Fuel Filler Cap View

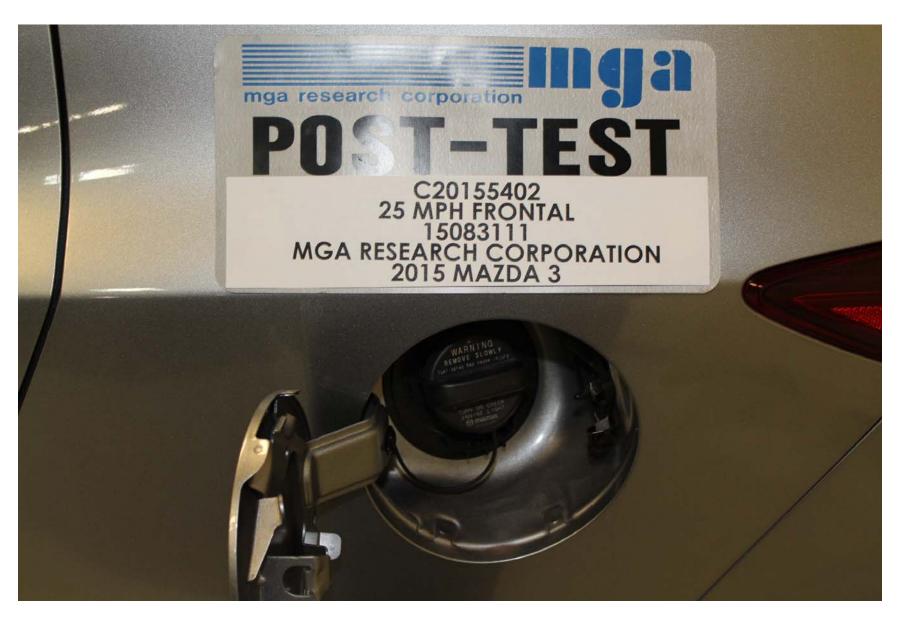


Photo No. 24 - Post-Test Fuel Filler Cap View

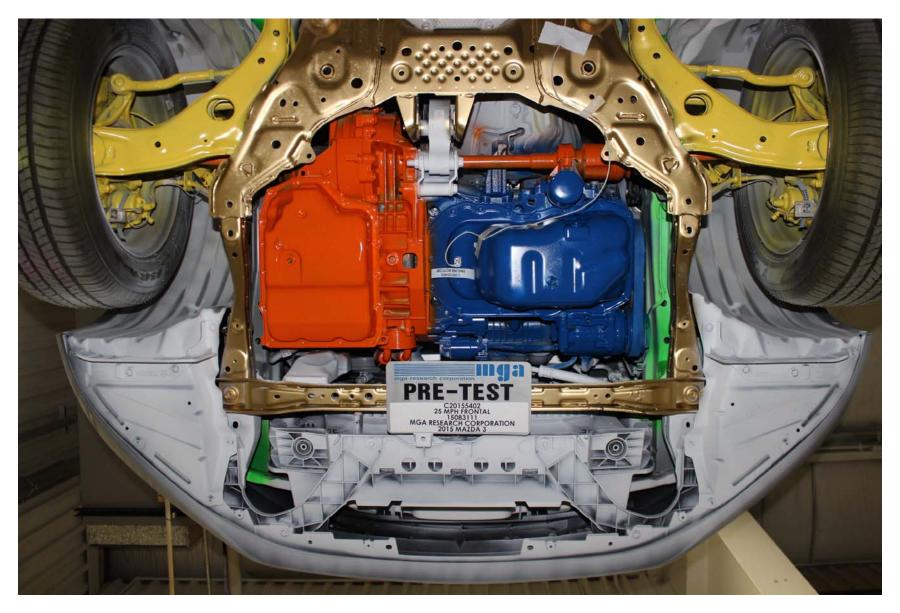


Photo No. 25 - Pre-Test Front Underbody View

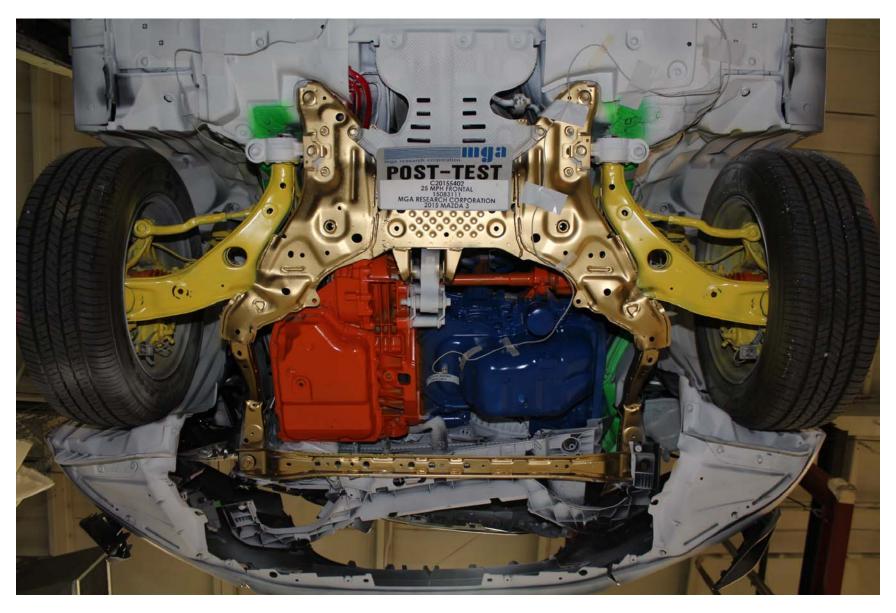


Photo No. 26 - Post-Test Front Underbody View

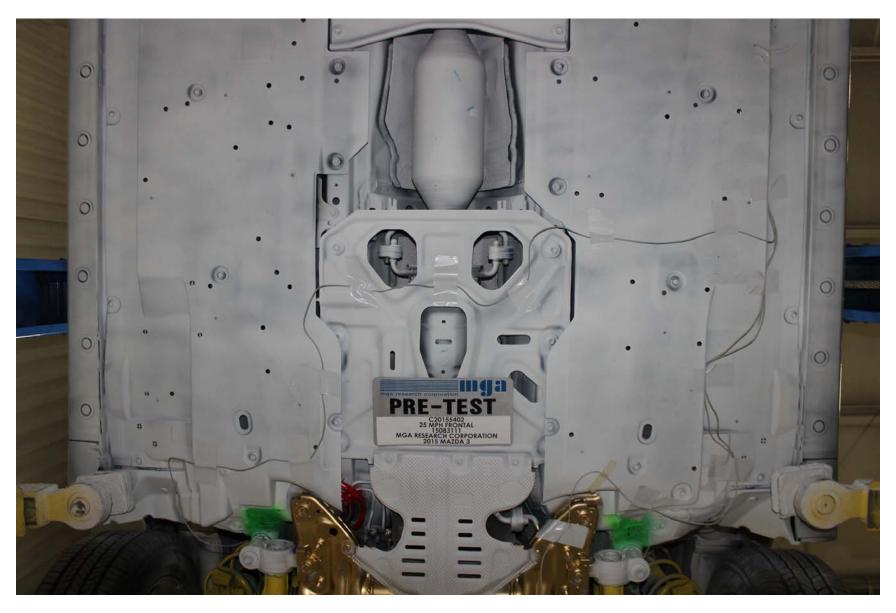


Photo No. 27 - Pre-Test Mid Underbody View

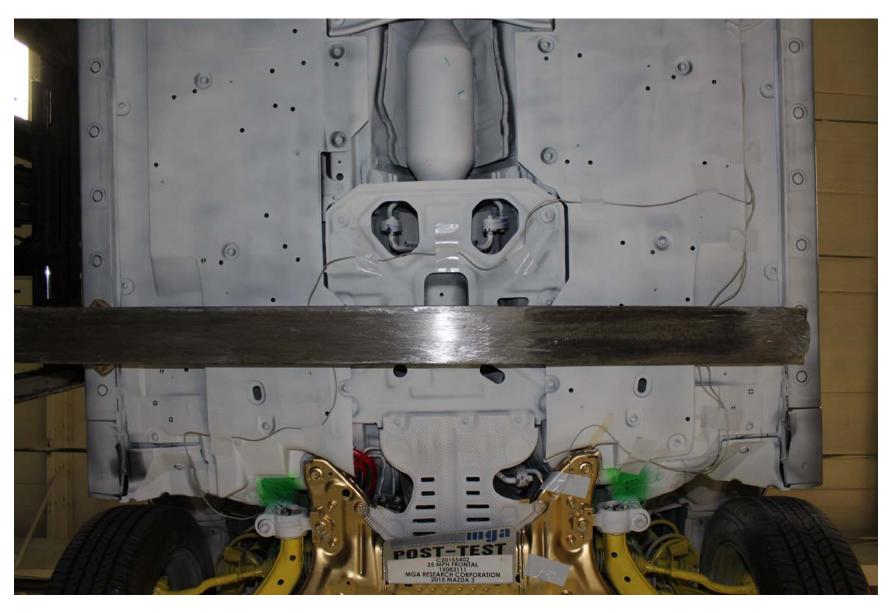


Photo No. 28 - Post-Test Mid Underbody View



Photo No. 29 - Pre-Test Mid Rear Underbody View



Photo No. 30 - Post-Test Mid Rear Underbody View



Photo No. 31 - Pre-Test Rear Underbody View

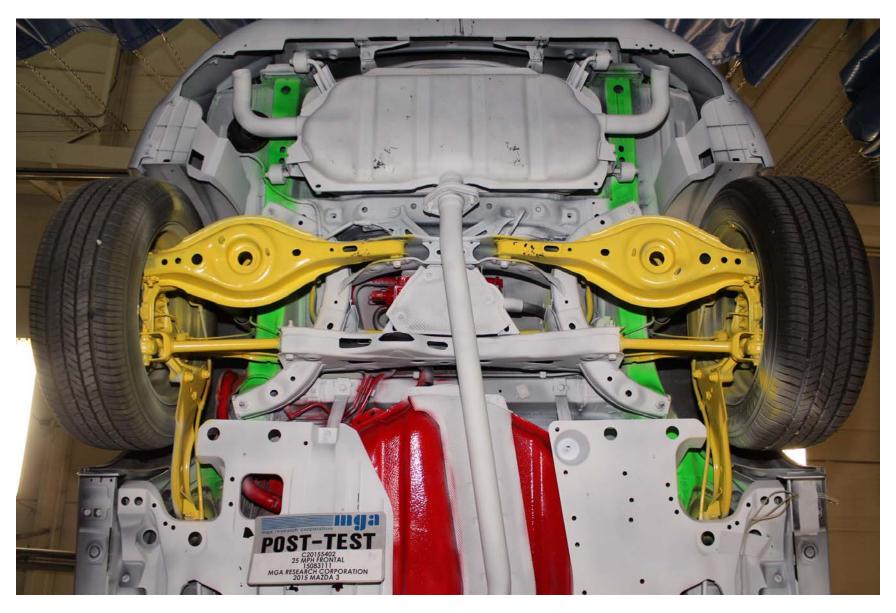


Photo No. 32 - Post-Test Rear Underbody View



Photo No. 33 - Pre-Test Driver Dummy Front View (head position)



Photo No. 34 - Post-Test Driver Dummy Front View (head position)



Photo No. 35 - Pre-Test Driver Dummy Position Left Side View



Photo No. 36 - Post-Test Driver Dummy Position Left Side View



Photo No. 37 - Pre-Test Driver Dummy Position Left Side View (door open)



Photo No. 38 - Post-Test Driver Dummy Position Left Side View (door open)



Photo No. 39 - Pre-Test Driver Dummy Seat Position



Photo No. 40 - Post-Test Driver Dummy Seat Position



Photo No. 41 - Pre-Test Driver Dummy Feet Position



Photo No. 42 - Post-Test Driver Dummy Feet Position



Photo No. 43 - Pre-Test Driver Side Knee Bolster View



Photo No. 44 - Post-Test Driver Side Knee Bolster View



Photo No. 45 - Post-Test Driver Dummy Airbag Contact



Photo No. 46 - Post-Test Driver Dummy Head Contact (headrest)

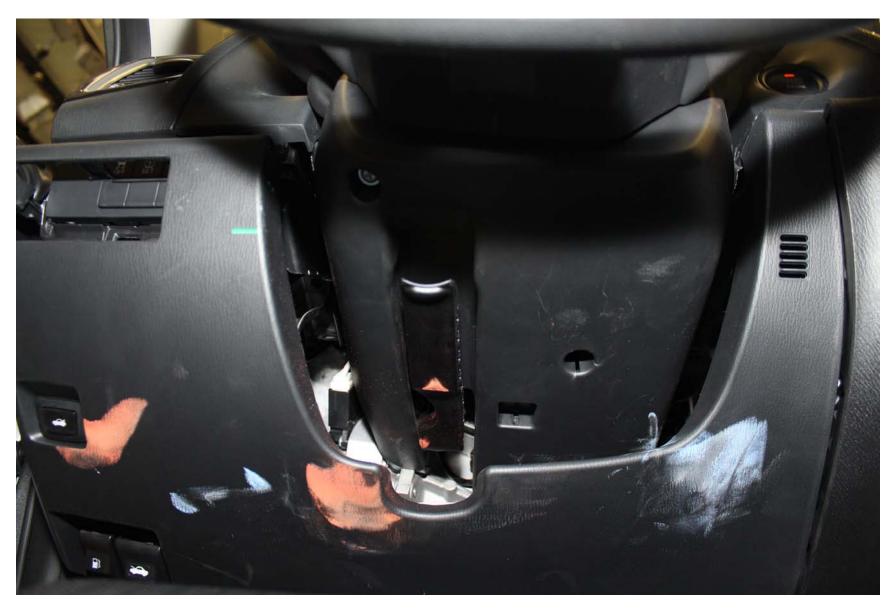


Photo No. 47 - Post-Test Driver Dummy Knee Contact



Photo No. 48 - Pre-Test Passenger Dummy Front View (head position)



Photo No. 49 - Post-Test Passenger Dummy Front View (head position)



Photo No. 50 - Pre-Test Passenger Dummy Position Right Side View



Photo No. 51 - Post-Test Passenger Dummy Position Right Side View



Photo No. 52 - Pre-Test Passenger Dummy Position Right Side View (door open)



Photo No. 53 - Post-Test Passenger Dummy Position Right Side View (door open)



Photo No. 54 - Pre-Test Passenger Dummy Seat Position



Photo No. 55 - Post-Test Passenger Dummy Seat Position



Photo No. 56 - Pre-Test Passenger Dummy Feet Position



Photo No. 57 - Post-Test Passenger Dummy Feet Position



Photo No. 58 - Pre-Test Passenger Side Knee Bolster View



Photo No. 59 - Post-Test Passenger Side Knee Bolster View



Photo No. 60 - Post-Test Passenger Dummy Airbag Contact



Photo No. 61 - Post-Test Passenger Dummy Head Contact (headrest)



Photo No. 62 - Post-Test Passenger Dummy Knee Contact

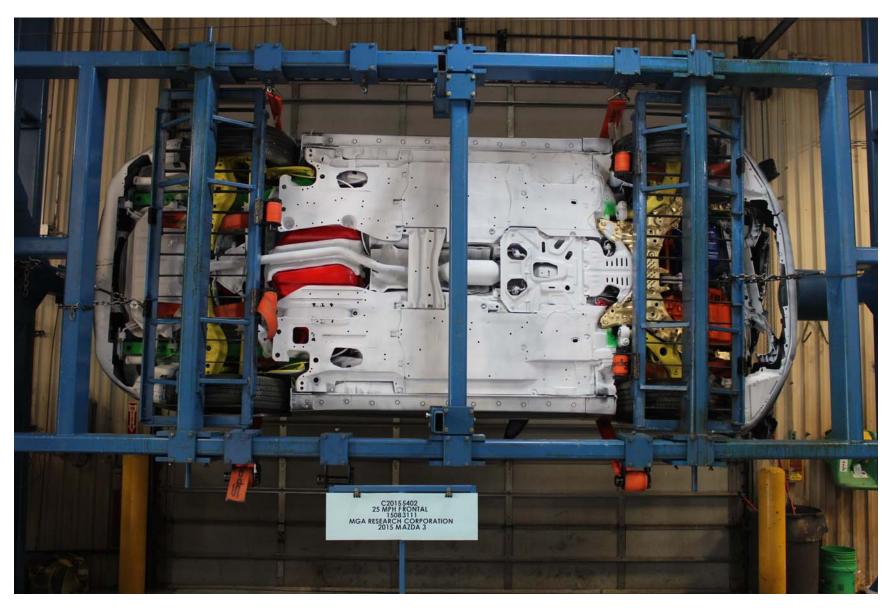


Photo No. 63 - Rollover 90 Degrees



Photo No. 64 - Rollover 180 Degrees



Photo No. 65 - Rollover 270 Degrees



Photo No. 66 - Rollover 360 Degrees

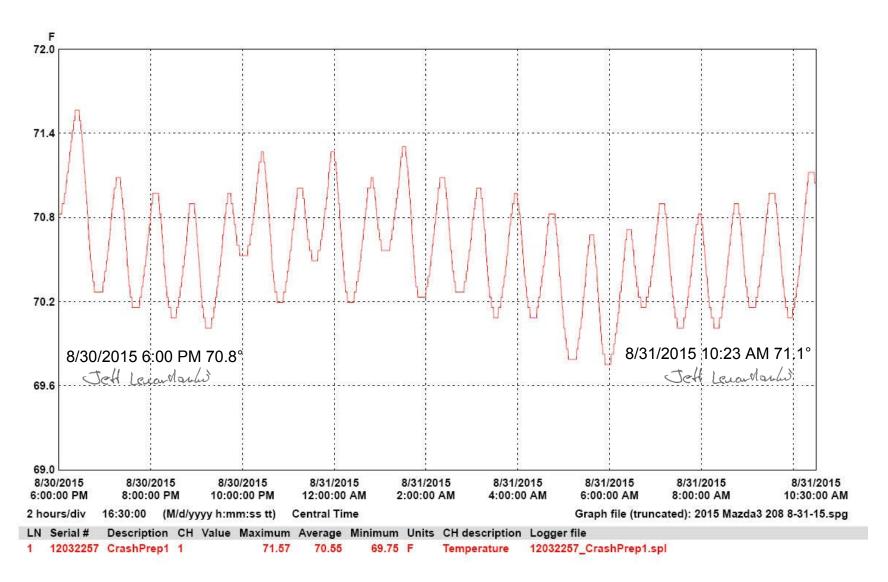


Photo No. 67 - Temperature Plot

## **APPENDIX D**

## LOW RISK PHOTOGRAPHS

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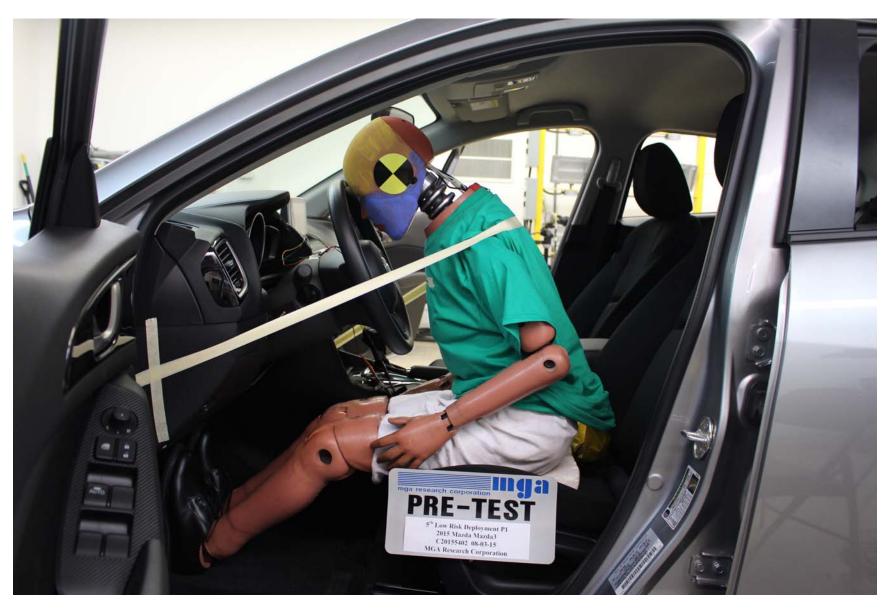


Photo No. 1 - Pre-Test 5th Fem. P1 Driver Dummy Left Side View



Photo No. 2 - Post-Test 5th Fem. P1 Driver Dummy Left Side View



Photo No. 3 - Pre-Test 5th Fem. P1 Driver Dummy Right Side View



Photo No. 4 - Post-Test 5th Fem. P1 Driver Dummy Right Side View



Photo No. 5 - Post-Test 5th Fem. P1 Driver Dummy Airbag Left Side View



Photo No. 6 - Post-Test 5th Fem. P1 Driver Dummy Airbag Right Side View

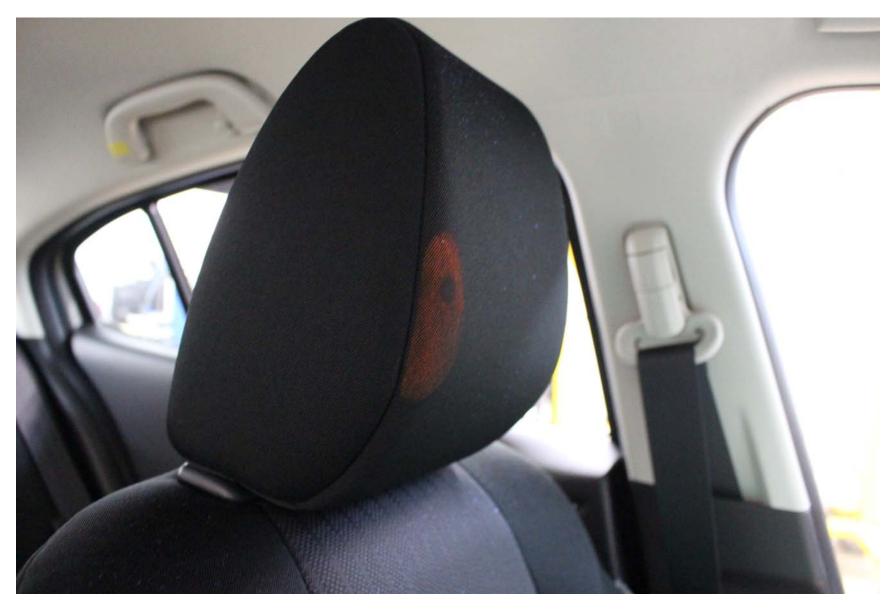


Photo No. 7 - Post-Test 5th Fem. P1 Driver Dummy Head Contact (headrest)



Photo No. 8 - Pre-Test 5th Fem. P2 Driver Dummy Left Side View



Photo No. 9 - Post-Test 5th Fem. P2 Driver Dummy Left Side View



Photo No. 10 - Pre-Test 5th Fem. P2 Driver Dummy Right Side View



Photo No. 11 - Post-Test 5th Fem. P2 Driver Dummy Right Side View



Photo No. 12 - Post-Test 5th Fem. P2 Driver Dummy Airbag Left Side View



Photo No. 13 - Post-Test 5th Fem. P2 Driver Dummy Airbag Right Side View



Photo No. 14 - Post-Test 5th Fem. P2 Driver Dummy Head Contact (visor)

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Section A



Angel Guard Angel Ride Car Bed Belted, Forward Seat Track



Angel Guard Angel Ride Car Bed Belted, Middle Seat Track



Angel Guard Angel Ride Car Bed Belted, Rearward Seat Track



Unbelted 5th Percentile Female Dummy Reactivation, Forward Seat Track



Cosco Arriva WBase, Belted, Rear Facing, Forward Seat Track



Cosco Arriva WBase, Belted, Rear Facing, Middle Seat Track



Cosco Arriva WBase, Belted, Rear Facing, Rearward Seat Track



Cosco Arriva WBase, Unbelted, Rear Facing, Forward Seat Track



Cosco Arriva WBase, Unbelted, Rear Facing, Middle Seat Track



Cosco Arriva WBase, Unbelted, Rear Facing, Rearward Seat Track



Cosco Arriva WBase, Unbelted, Forward Facing, Forward Seat Track



Cosco Arriva WBase, Unbelted, Forward Facing, Middle Seat Track



Cosco Arriva WBase, Unbelted, Forward Facing, Rearward Seat Track



Cosco Arriva WOut Base, Belted, Rear Facing, Forward Seat Track



Cosco Arriva WOut Base, Belted, Rear Facing, Middle Seat Track



Cosco Arriva WOut Base, Belted, Rear Facing, Rearward Seat Track



Cosco Arriva WOut Base, Unbelted, Rear Facing, Forward Seat Track



Cosco Arriva WOut Base, Unbelted, Rear Facing, Middle Seat Track



Cosco Arriva WOut Base, Unbelted, Rear Facing, Rearward Seat Track



Cosco Arriva WOut Base, Unbelted, Forward Facing, Forward Seat Track



Cosco Arriva WOut Base, Unbelted, Forward Facing, Middle Seat Track



Cosco Arriva WOut Base, Unbelted, Forward Facing, Rearward Seat Track



Unbelted 5th Percentile Female Dummy Reactivation, Middle Seat Track



Graco Snugride W-Base, Belted, Rear Facing, Forward Seat Track



Graco Snugride W-Base, Belted, Rear Facing, Middle Seat Track



Graco Snugride W-Base, Belted, Rear Facing, Rearward Seat Track



Graco Snugride W-Base, Unbelted, Rear Facing, Forward Seat Track



Graco Snugride W-Base, Unbelted, Rear Facing, Middle Seat Track



Graco Snugride W-Base, Unbelted, Rear Facing, Rearward Seat Track



Graco Snugride W-Base, Unbelted, Forward Facing, Forward Seat Track





Graco Snugride W-Base, Unbelted, Forward Facing, Rearward Seat Track



Graco Snugride W-Out Base, Belted, Rear Facing, Forward Seat Track



Graco Snugride W-Out Base, Belted, Rear Facing, Middle Seat Track



Graco Snugride W-Out Base, Belted, Rear Facing, Rearward Seat Track



Graco Snugride W-Out Base, Unbelted, Rear Facing, Forward Seat Track



Graco Snugride W-Out Base, Unbelted, Rear Facing, Middle Seat Track



Graco Snugride W-Out Base, Unbelted, Rear Facing, Rearward Seat Track



Graco Snugride W-Out Base, Unbelted, Forward Facing, Forward Seat Track



Graco Snugride W-Out Base, Unbelted, Forward Facing, Middle Seat Track



Graco Snugride W-Out Base, Unbelted, Forward Facing, Rearward Seat Track



Unbelted 5th Percentile Female Dummy Reactivation, Rearward Seat Track



Peg Perego Viaggio W-Base, Belted, Rear Facing, Forward Seat Track



Peg Perego Viaggio W-Base, Belted, Rear Facing, Middle Seat Track



Peg Perego Viaggio W-Base, Belted, Rear Facing, Rearward Seat Track



Peg Perego Viaggio W-Base, Unbelted, Rear Facing, Forward Seat Track



Peg Perego Viaggio W-Base, Unbelted, Rear Facing, Middle Seat Track



Peg Perego Viaggio W-Base, Unbelted, Rear Facing, Rearward Seat Track



Peg Perego Viaggio W-Base, Unbelted, Forward Facing, Forward Seat Track



Peg Perego Viaggio W-Base, Unbelted, Forward Facing, Middle Seat Track



Peg Perego Viaggio W-Base, Unbelted, Forward Facing, Rearward Seat Track

Peg Perego Viaggio W-Out Base, Belted, Rear Facing, Forward Seat Track



Peg Perego Viaggio W-Out Base, Belted, Rear Facing, Rearward Seat Track



Peg Perego Viaggio W-Out Base, Belted, Rear Facing, Middle Seat Track



Peg Perego Viaggio W-Out Base, Unbelted, Rear Facing, Forward Seat Track



Peg Perego Viaggio W-Out Base, Unbelted, Rear Facing, Middle Seat Track



Peg Perego Viaggio W-Out Base, Unbelted, Rear Facing, Rearward Seat Track



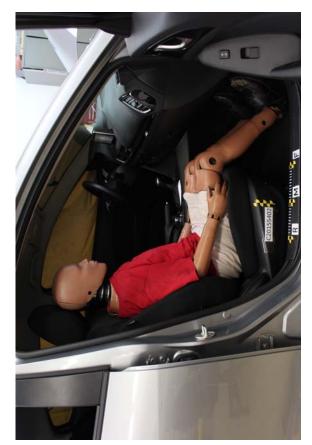
Peg Perego Viaggio W-Out Base, Unbelted, Forward Facing, Forward Seat Track



Peg Perego Viaggio W-Out Base, Unbelted, Forward Facing, Middle Seat Track



Peg Perego Viaggio W-Out Base, Unbelted, Forward Facing, Rearward Seat Track



Unbelted 5th Percentile Female Dummy Reactivation, Middle Seat Track



Britax Roundabout Forward Facing Belted, Forward Seat Track



Britax Roundabout Forward Facing Belted, Middle Seat Track



Britax Roundabout Forward Facing Belted, Rearward Seat Track



Britax Roundabout Forward Facing Unbelted, Forward Seat Track



Britax Roundabout Forward Facing Unbelted, Middle Seat Track



Britax Roundabout Forward Facing Unbelted, Rearward Seat Track



Britax Roundabout Rear Facing Belted, Forward Seat Track



Britax Roundabout Rear Facing Belted, Middle Seat Track



Britax Roundabout Rear Facing Belted, Rearward Seat Track



Britax Roundabout Rear Facing Unbelted, Forward Seat Track



Britax Roundabout Rear Facing Unbelted, Middle Seat Track



Britax Roundabout Rear Facing Unbelted, Rearward Seat Track



Unbelted 5th Percentile Female Dummy Reactivation, Middle Seat Track



Cosco High Back Booster Forward Facing Belted, Forward Seat Track



Cosco High Back Booster Forward Facing Belted, Middle Seat Track



Cosco High Back Booster Forward Facing Belted, Rearward Seat Track



Cosco High Back Booster Forward Facing Unbelted, Forward Seat Track





Cosco High Back Booster Forward Facing Unbelted, Rearward Seat Track





Cosco High Back Booster Rear Facing Unbelted, Middle Seat Track

Cosco High Back Booster Rear Facing Unbelted, Forward Seat Track

Cosco High Back Booster Forward Facing Unbelted, Middle Seat Track



Cosco High Back Booster Rear Facing Unbelted, Rearward Seat Track



Unbelted 5th Percentile Female Dummy Reactivation, Rearward Seat Track



Evenflo Generations Forward Facing Belted, Middle Seat Track

Evenflo Generations Forward Facing Belted, Forward Seat Track



Evenflo Generations Forward Facing Belted, Rearward Seat Track

.

Evenflo Generations Forward Facing Unbelted, Forward Seat Track





Evenflo Generations Forward Facing Unbelted, Rearward Seat Track



Evenflo Generations Rear Facing Unbelted, Forward Seat Track



Evenflo Generations Rear Facing Unbelted, Middle Seat Track

Evenflo Generations Forward Facing Unbelted, Middle Seat Track



Evenflo Generations Rear Facing Unbelted, Rearward Seat Track

Unbelted 5th Percentile Female Dummy Reactivation, Forward Seat Track

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CONSTRUCT.

Graco Comfortsport Forward Facing Belted, Middle Seat Track



Graco Comfortsport Forward Facing Belted, Rearward Seat Track



Graco Comfortsport Forward Facing Unbelted, Forward Seat Track

Graco Comfortsport Forward Facing Belted, Forward Seat Track



Graco Comfortsport Forward Facing Unbelted, Middle Seat Track



Graco Comfortsport Forward Facing Unbelted, Rearward Seat Track



Graco Comfortsport Rear Facing Belted, Forward Seat Track



Graco Comfortsport Rear Facing Belted, Middle Seat Track



Graco Comfortsport Rear Facing Belted, Rearward Seat Track



Graco Comfortsport Rear Facing Unbelted, Forward Seat Track



Graco Comfortsport Rear Facing Unbelted, Middle Seat Track



Graco Comfortsport Rear Facing Unbelted, Rearward Seat Track



Unbelted 5th Percentile Female Dummy Reactivation, Middle Seat Track



3-Year-Old Forward Facing Britax Roundabout Belted, Forward Seat Track



3-Year-Old Forward Facing Britax Roundabout Belted, Middle Seat Track



3-Year-Old Forward Facing Britax Roundabout Belted, Rearward Seat Track



Unbelted 5th Percentile Female Dummy Reactivation, Rearward Seat Track

SCONSOLUTION AND ADDRESS OF THE PARTY OF THE

3-Year-Old Forward Facing Cosco High Back Booster Belted, Middle Seat Track



3-Year-Old Forward Facing Cosco High Back Booster Belted, Rearward Seat Track



3-Year-Old Forward Facing Cosco High Back Booster Cinched With Harness, Forward

3-Year-Old Forward Facing Cosco High Back Booster Belted, Forward Seat Track





3-Year-Old Forward Facing Cosco High Back Booster Cinched With Harness, Rearward 3-Year-Old Forward Facing Cosco High Back Booster Cinched With Harness, Middle Seat



Unbelted 5th Percentile Female Dummy Reactivation, Forward Seat Track



3-Year-Old Forward Facing Evenflo Generations Belted, Middle Seat Track



3-Year-Old Forward Facing Evenflo Generations Belted, Rearward Seat Track



3-Year-Old Forward Facing Evenflo Generations Cinched With Harness, Forward Seat



3-Year-Old Forward Facing Evenflo Generations Cinched With Harness, Middle Seat



3-Year-Old Forward Facing Evenflo Generations Cinched With Harness, Rearward Seat



Unbelted 5th Percentile Female Dummy Reactivation, Middle Seat Track



3-Year-Old Forward Facing Graco Comfortsport Belted, Forward Seat Track



3-Year-Old Forward Facing Graco Comfortsport Belted, Middle Seat Track



3-Year-Old Forward Facing Graco Comfortsport Belted, Rearward Seat Track



Unbelted 5th Percentile Female Dummy Reactivation, Rearward Seat Track



3-Year-Old Cosco Summit Deluxe Belted, Middle Seat Track



THE PARTY OF THE P

3-Year-Old Cosco Summit Deluxe Belted, Rearward Seat Track



3-Year-Old Cosco Summit Deluxe Cinched With Harness, Forward Seat Track

3-Year-Old Cosco Summit Deluxe Belted, Forward Seat Track



3-Year-Old Cosco Summit Deluxe Cinched With Harness, Middle Seat Track



3-Year-Old Cosco Summit Deluxe Cinched With Harness, Rearward Seat Track



Unbelted 5th Percentile Female Dummy Reactivation, Rearward Seat Track



3-Year-Old Graco Platinum Cargo Belted, Forward Seat Track



3-Year-Old Graco Platinum Cargo Belted, Middle Seat Track



3-Year-Old Graco Platinum Cargo Belted, Rearward Seat Track



3-Year-Old Graco Platinum Cargo Cinched With Harness, Forward Seat Track



3-Year-Old Graco Platinum Cargo Cinched With Harness, Middle Seat Track



3-Year-Old Graco Platinum Cargo Cinched With Harness, Rearward Seat Track



Unbelted 5th Percentile Female Dummy Reactivation, Middle Seat Track





6-Year-Old Cosco Summit Deluxe Belted, Middle Seat Track







Unbelted 5th Percentile Female Dummy Reactivation, Rearward Seat Track

6-Year-Old Cosco Summit Deluxe Belted, Rearward Seat Track



6-Year-Old Graco Platinum Cargo Belted, Middle Seat Track



6-Year-Old Graco Platinum Cargo Belted, Rearward Seat Track

Unbelted 5th Percentile Female Dummy Reactivation, Middle Seat Track

6-Year-Old Graco Platinum Cargo Belted, Forward Seat Track





3-Year-Old Unbelted, Forward Seat Track, Position 2





3-Year-Old Unbelted, Forward Seat Track, Position 3



3-Year-Old Unbelted, Forward Seat Track, Position 6





3-Year-Old Unbelted, Forward Seat Track, Position 7

3-Year-Old Unbelted, Middle Seat Track, Position 1

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3-Year-Old Unbelted, Forward Seat Track, Position 5







3-Year-Old Unbelted, Middle Seat Track, Position 2

3-Year-Old Unbelted, Middle Seat Track, Position 3

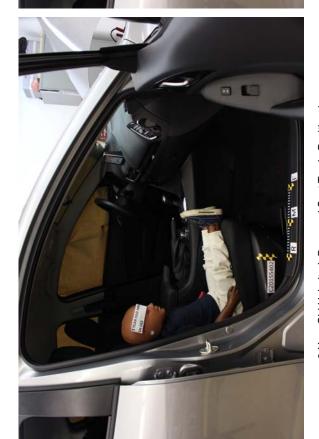
3-Year-Old Unbelted, Middle Seat Track, Position 5

3-Year-Old Unbelted, Middle Seat Track, Position 4





3-Year-Old Unbelted, Middle Seat Track, Position 7



3-Year-Old Unbelted, Rearward Seat Track, Position 1

3-Year-Old Unbelted, Middle Seat Track, Position 6





3-Year-Old Unbelted, Rearward Seat Track, Position 3



3-Year-Old Unbelted, Rearward Seat Track, Position 5

3-Year-Old Unbelted, Rearward Seat Track, Position 6



Unbelted 5th Percentile Female Dummy Reactivation, Forward Seat Track



6-Year-Old Unbelted, Forward Seat Track, Position 2

6-Year-Old Unbelted, Forward Seat Track, Position 1



6-Year-Old Unbelted, Forward Seat Track, Position 3

6-Year-Old Unbelted, Forward Seat Track, Position 4









6-Year-Old Unbelted, Middle Seat Track, Position 2



6-Year-Old Unbelted, Middle Seat Track, Position 3

6-Year-Old Unbelted, Middle Seat Track, Position 4

E-50









6-Year-Old Unbelted, Rearward Seat Track, Position 3

6-Year-Old Unbelted, Rearward Seat Track, Position 1



Unbelted 5th Percentile Female Dummy Reactivation, Middle Seat Track

#### **APPENDIX F**

### **INSTRUMENTATION CALIBRATION**

# **INSTRUMENTS FOR DRIVER DUMMY NO.: 510**

	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Head X	P83180	Endevco	7/20/2015
Head Y	P78777	Endevco	7/20/2015
Head Z	P78781	Endevco	7/20/2015
Neck Load Cell	N1206	Denton	6/30/2015
Chest X	P85174	Endevco	7/22/2015
Chest Y	P86736	Endevco	7/1/2015
Chest Z	P86737	Endevco	7/1/2015
Chest Displacement	510	Servo	7/21/2015
Left Femur Load Cell	F1384	Denton	7/30/2015
Right Femur Load Cell	F979	Denton	7/30/2015

## **INSTRUMENTS FOR PASSENGER DUMMY NO.: 511**

	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Head X	P82603	Endevco	8/19/2015
Head Y	P82604	Endevco	8/19/2015
Head Z	P82605	Endevco	8/19/2015
Neck Load Cell	N1561	Denton	4/15/2015
Chest X	P84432	Endevco	8/19/2015
Chest Y	P84433	Endevco	8/19/2015
Chest Z	P84435	Endevco	8/19/2015
Chest Displacement	511	Servo	8/17/2015
Left Femur Load Cell	F9426	Denton	8/19/2015
Right Femur Load Cell	F9425	Denton	8/19/2015

INSTRUMENTS FOR LOW RISK 5<sup>TH</sup> FEMALE DUMMY NO.: 510 (P1 & P2)

	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Head X	P83180	Endevco	7/20/2015
Head Y	P83181	Endevco	7/20/2015
Head Z	P83182	Endevco	7/20/2015
Neck Load Cell	N1206	Denton	6/30/2015
Chest X	P85174	Endevco	7/22/2015
Chest Y	P86736	Endevco	7/1/2015
Chest Z	P86737	Endevco	7/1/2015
Chest Displacement	510	Servo	7/21/2015
Left Femur Load Cell	F1384FZ	Denton	7/30/2015
Right Femur Load Cell	F979FZ	Denton	7/30/2015

### **VEHICLE INSTRUMENTS**

	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Left Rear Seat Crossmember X	P78808	Endevco	5/27/2015
Right Rear Seat Crossmember X	P79726	Endevco	8/20/2015
Top of Engine X	P88766	Endevco	7/7/2015
Bottom of Engine X	P78845	Endevco	8/20/2015
Left Brake Caliper X	P78700	Endevco	8/20/2015
Right Brake Caliper X	P74667	Endevco	3/20/2015
Instrument Panel X	P78945	Endevco	8/20/2015
Trunk Z	P77647	Endevco	8/13/2015